CDP-CX57

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

Model Name Using Similar Mechanism	CDP-CX50/CX571
CD Mechanism Type	CDM-46C1
Base Unit Type	KSM-213BFN/M-NP
Optical Pick-up Type	KSS-213B/S-N

SPECIFICATIONS

Compact disc player

Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous
Laser output	Max 44.6 µW* * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up block with 7 mm aperture.
Frequency response	20 Hz to 20 kHz ± 1dB
Signal-to-noise ratio	More than 107 dB
Dynamic range	More than 88 dB
Harmonic distortion	Less than 0.013%
Channel separation	More than 100 dB

Outputs

	Jack type	Maximum output level	Load impedance
LINE OUT	Phono Jacks	2V (at 50 kilohms)	Over 10 kilohms
DIGITAL OUT (OPTICAL)	Optical output connector	–18 dBm	Wave length: 660 nm

General

Power requirements

Where purchased	Power requirements
US/Canada	120 V AC, 60 Hz
Australia	240 V AC, 50/60 Hz
UK	220 V – 230 V AC, 50/60 Hz
Other countries	110 V – 120 V or 220 V – 240 V AC, adjustable, 50/60 Hz

Power consumption	12 W
Dimensions (approx.) (w/h/d)	When the front cover is closed 430 × 182.5 × 295 mm (17 × 7 1/4 × 11 5/8 in.) incl. projecting parts When the front cover is open 430 × 182.5 × 414 mm (17 × 7 1/4 × 16 3/8 in.) incl. projecting parts
Mass (approx.)	5.5 kg (12 lbs 3 oz)

Supplied accessories

Audio cord (2 phono plugs – 2 phono plugs) (1)
CONTROL A1 cord (supplied for Canadian models only) (1)
Remote commander (remote) (1)
Sony SUM-3 (NS) batteries (2)
CD booklet holder (1) and Label (1)

Design and specifications are subject to change without notice.

COMPACT DISC PLAYER

MICROFILM

SONY®

SECTION 1
SERVICING NOTES

TABLE OF CONTENTS

1. SERVICING NOTES 2

2. GENERAL 6

3. DISASSEMBLY 7

4. TEST MODE 11

5. MECHANICAL ADJUSTMENTS 14

6. ELECTRICAL ADJUSTMENTS 17

7. DIAGRAMS 20

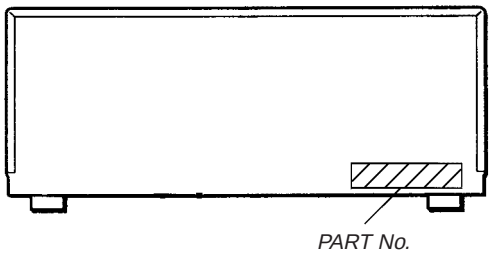
7-1. Block Diagrams
- BD Section 23
- Main Section 25

7-2. Printed Wiring Board – BD Section – 27
7-3. Schematic Diagram – BD Section – 29
7-4. Printed Wiring Board – Audio Section – 31
7-5. Schematic Diagram – Audio Section – 33
7-6. Printed Wiring Board – Main Section – 35
7-7. Schematic Diagram – Main Section – 37
7-8. Printed Wiring Boards – Panel Section – 39
7-9. Schematic Diagram – Panel Section – 41
7-10. Printed Wiring Boards – Sensor/Motor Section – 43
7-11. Schematic Diagram – Sensor/Motor Section – 45
7-12. IC Pin Function Description 49

8. EXPLODED VIEWS 55

9. ELECTRICAL PARTS LIST 61

MODEL IDENTIFICATION
— BACK PANEL —



PART No.	MODEL
4-997-568-0☐	US model
4-997-568-1☐	Canadian model
4-997-568-2☐	AEP, AED model
4-997-568-3☐	UK model
4-997-568-4☐	Australian model
4-997-568-5☐	E model
4-997-568-6☐	Singapore model

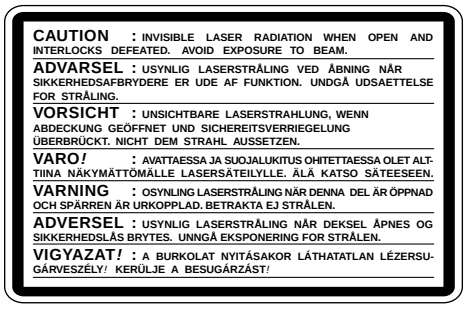
• Abbreviation
AED: North European

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

The laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

(Except for the customers in the United States and Canada)
The following caution label is located inside the unit.


CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLING LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVERSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYAZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

For the customers in Canada

CAUTION
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage.
Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers.). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

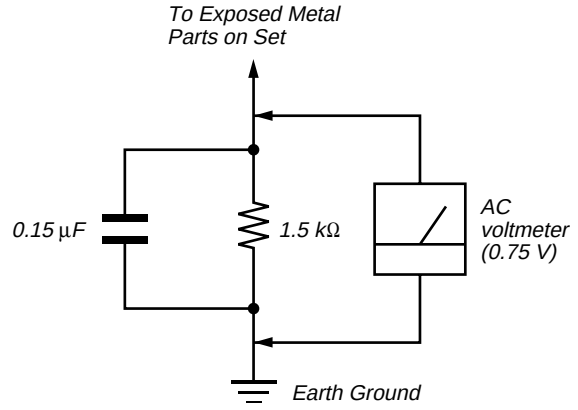


Fig. A. Using an AC voltmeter to check AC leakage.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the “S curve check” in ”CD section adjustment” and check that the S curve waveform is output repeatedly.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

CD-TEXT TEST DISC

This unit is able to display the test data (character information) written in the CD on its fluorescent indicator tube.
The CD-TEXT TEST DISC (TGCS-313:4-989-366-01) is used for checking the display.
To check, perform the following procedure.

Checking Method:

1. Turn ON the power, set the disc on the disc table with the side labeled as “test disc” as the right side, close the front cover, and chuck the disc.
2. Press the [▷] button and play back the disc.
3. The following will be displayed on the fluorescent indicator tube.
   Display : 1kHz/0 dB/ L&R
4. Press the [⏮] and [⏭] buttons to switch the track. The text data of each track will be displayed.
   For details of the displayed contents for each track, refer to “Table 1 : CD-TEXT TEST DISC TEXT Data Contents” and “Table 2 : CD-TEXT TEST DISC Recorded Contents and Display”.

Restrictions in CD-TEXT Display

In this unit, some special characters will not be displayed properly. These will be displayed as a space or a character resembling it. For details, refer to “Table 2 : CD-TEXT DISC Recorded Contents and Display”.

Table 1 : CD-TEXT TEST DISC TEXT Data Contents (TRACKS No. 1 to 41:Normal Characters)

TRACK No.	Displayed Contents	TRACK No.	Displayed Contents
1	1kHz/0dB/L&R	22	1kHz/-90dB/L&R
2	20Hz/0dB/L&R	23	Infinity Zero w/o emphasis//L&R
3	40Hz/0dB/L&R	24	Infinity Zero with emphasis//L&R
4	100Hz/0dB/L&R	25	400Hz+7kHz(4:1)/0dB/L&R
5	200Hz/0dB/L&R	26	400Hz+7kHz(4:1)/-10dB/L&R
6	500Hz/0dB/L&R	27	19kHz+20kHz(1:1)/0dB/L&R
7	1kHz/0dB/L&R	28	19kHz+20kHz(1:1)/-10dB/L&R
8	5kHz/0dB/L&R	29	100Hz/0dB/L*
9	7kHz/0dB/L&R	30	1kHz/0dB/L*
10	10kHz/0dB/L&R	31	10kHz/0dB/L*
11	16kHz/0dB/L&R	32	20kHz/0dB/L*
12	18kHz/0dB/L&R	33	100Hz/0dB/R*
13	20kHz/0dB/L&R	34	1kHz/0dB/R*
14	1kHz/0dB/L&R	35	10kHz/0dB/R*
15	1kHz/-1dB/L&R	36	20kHz/0dB/R*
16	1kHz/-3dB/L&R	37	100Hz Squer Wave//L&R
17	1kHz/-6dB/L&R	38	1kHz Squer Wave//L&R
18	1kHz/-10dB/L&R	39	1kHz w/emphasis/-0.37dB/L&R
19	1kHz/-20dB/L&R	40	5kHz w/emphasis/-4.53dB/L&R
20	1kHz/-60dB/L&R	41	16kHz w/emphasis/-9.04dB/L&R
21	1kHz/-80dB/L&R		

NOTE : The contents of Track No. 1 to 41 are the same as those of the current TEST DISC-their titles are displayed.

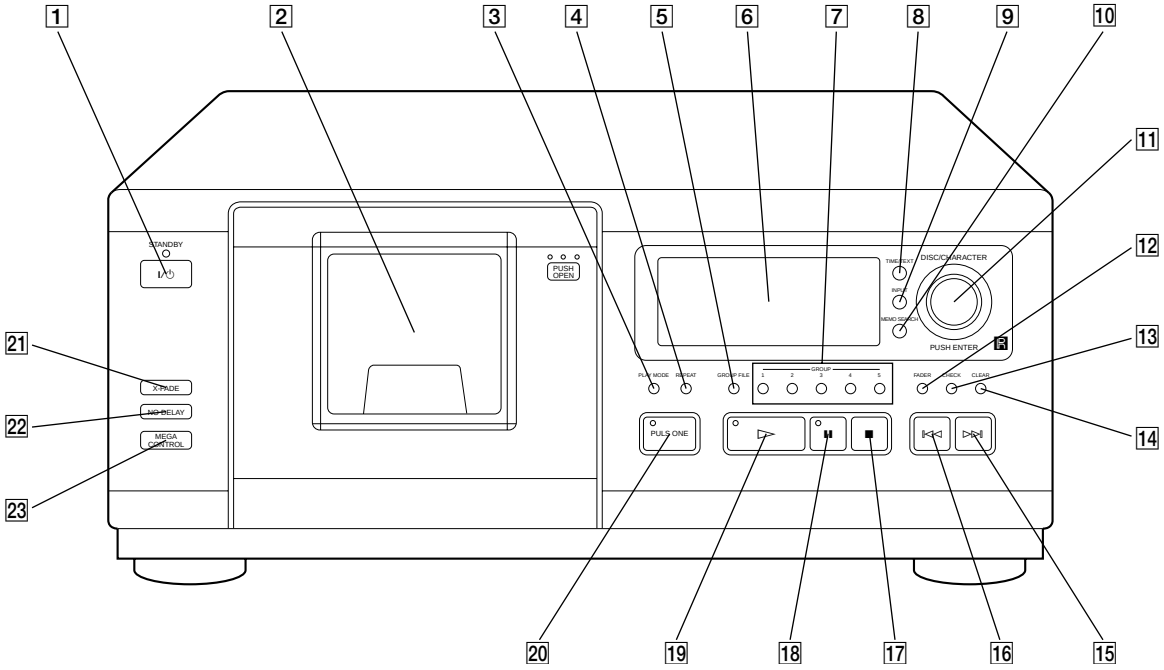
Table 2: CD-TEXT TEST DISC Recorded Contents and Display
(In this unit, some special characters cannot be displayed. This is no a fault.)

TRACK No.	Recorded Contents		Display	
42	! " # $ % & ´	(21h to 27h)1kHz 0dB L&R	← All the same	
43	( ) * + , – . /	(28h to 2Fh)	← All the same	
44	0 1 2 3 4 5 6 7	(30h to 37Fh)	← All the same	
45	8 9 : ; < = > ?	(38h to 3Fh)	← All the same	
46	@ A B C D E F G	(40h to 47Fh)	← All the same	
47	H I J K L M N O	(48h to 4Fh)	← All the same	
48	P Q R S T U V W	(50h to 57Fh)	P Q R S T U V W	(50h to 57h)
49	X Y Z [¥] ^ _	(58h to 5Fh)	X Y Z [\ ] ^ _	(58····
50	` a b c d e f g	(60h to 67Fh)	` a b c d e f g	(60h to 67h)
51	h i j k l m n o	(68h to 6Fh)	← All the same	
52	p q r s t u v w	(70h to 77Fh)	p q r s t u v w	(70h to 77h)
53	x y z { l } ~ ▉	(78h to 7Fh)	x y z { ¦ } ~ ▉	(78····
54	▯ ¡ ¢ £ ¤ ¥ ¦ §	(A0h to A7h) 8859-1	¡ ¢ £ ¤ ¥ ¦ §	(A0····▯ is not displayed
55	♪ © ª « ¬ ® ¯	(A8h to AFh)	♪	(A8···· © ª « ¬ ® ¯ are not displayed
56	· ± ² ³ ´ µ ¶ •	(B0h to B7h)	´ µ •	(B0····· ± ² ³ ¶ are not displayed
57	† ¹ º » ¼ ½ ¾ ¿	(B8h to BFh)	† ¿	(B8····¹ º » ¼ ½ ¾ are not displayed
58	À Á Â Ã Ä Å Æ Ç	(C0h to C7Fh)	À Á Â Ã Ä Å Æ Ç	(C0h to C7h)
59	È É Ê Ë Ì Í Î Ï	(C8h to CFh)	← All the same	
60	Ð Ñ Ò Ó Ô Õ Ö ×	(D0h to D7Fh)	D Ñ Ò Ó Ô Õ Ö ×	(D0h to D7h)
61	Ø Ù Ú Û Ü Ý Þ ß	(D8h to DFh)	Ø Ù Ú Û Ü Ý Þ ß	(D8····
62	à á â ã ä å æ ç	(E0h to E7h)	à á â ã ä å æ ç	(E0h to E7h)
63	è é ê ë ì í î ï	(E8h to EFh)	← All the same	
64	ð ñ ò ó ô õ ö ÷	(F0h to F7Fh)	ð ñ ò ó ô õ ö ÷	(F0h to F7h)
65	ø ù ú û ü ý þ ÿ	(F8h to FFFh)	ø ù ú û ü ý þ ÿ	(F8h to FFh)
66	No.66		← All the same	
67	No.67		← All the same	
to	to		to	
99	No.99		← All the same	

SECTION 2
GENERAL

LOCATION OF PARTS AND CONTROLS

Front Panel



1 I/⏻ (power switch) button
2 Front cover
3 PLAY MODE button
4 REPEAT button
5 GROUP FILE button
6 Display window
7 GROUP 1-5 buttons
8 TIME/TEXT button
9 INPUT button
10 MEMO SEARCH button
11 JOG dial (DISC/CHARACTER/PUSH ENTER knob)
12 FADER button
13 CHECK button
14 CLEAR button
15 ▷▷I button
16 I◁◁ button
17 ■ button
18 ❚❚ button
19 ▷ button
20 PLUS ONE button
21 X-FADE button
22 NO DELAY button
23 MEGA CONTROL button

SECTION 3
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

CASE, FRONT PANEL

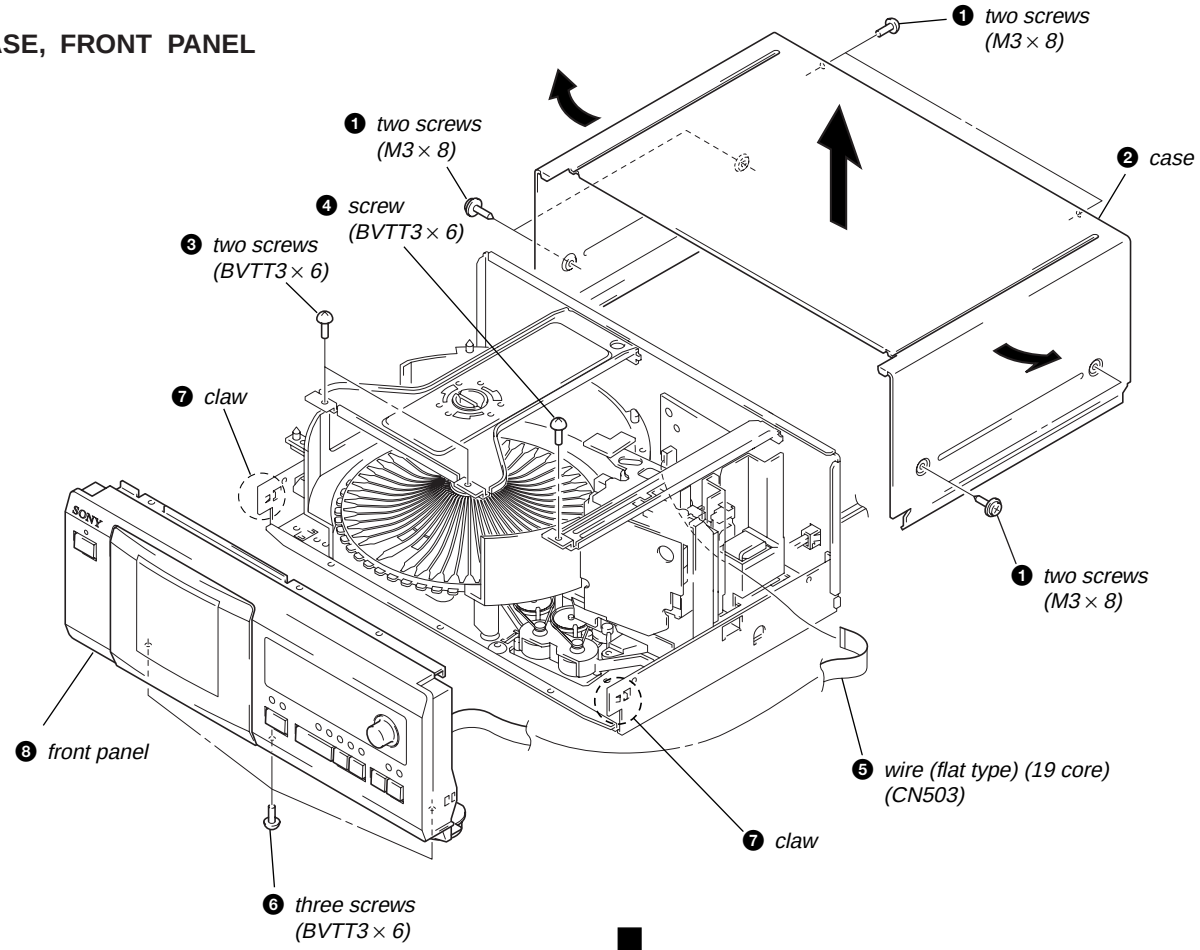
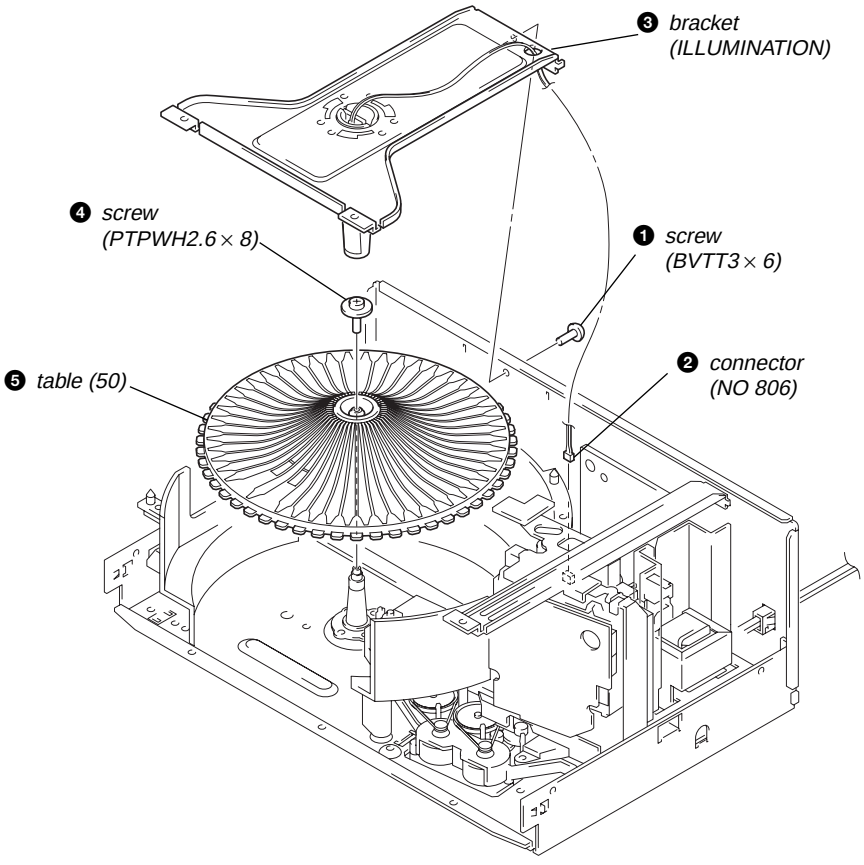
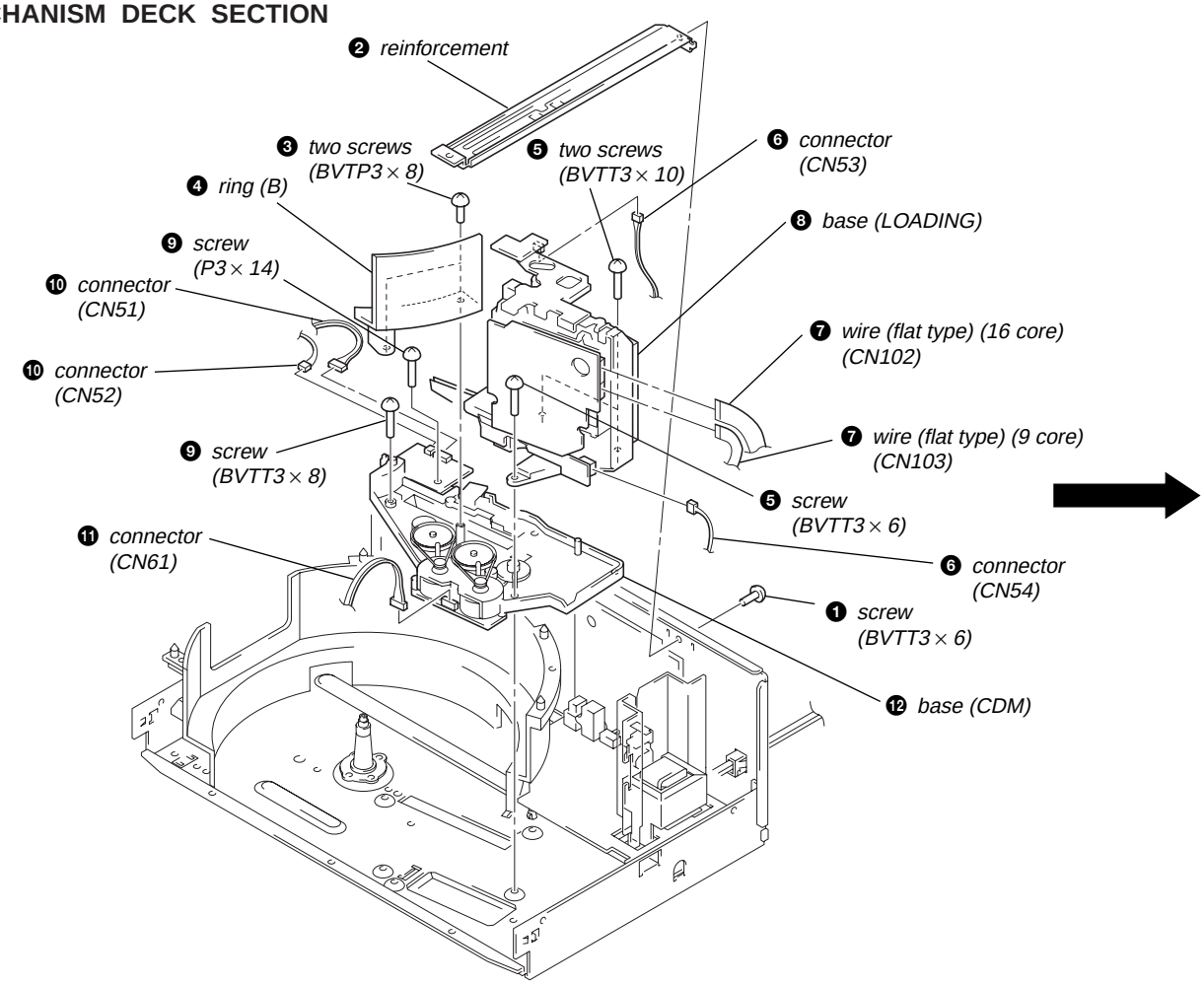

❶ two screws (M3 × 8)
❷ case
❶ two screws (M3 × 8)
❹ screw (BVTT3 × 6)
❸ two screws (BVTT3 × 6)
❼ claw
❶ two screws (M3 × 8)
❽ front panel
❺ wire (flat type) (19 core) (CN503)
❼ claw
❻ three screws (BVTT3 × 6)

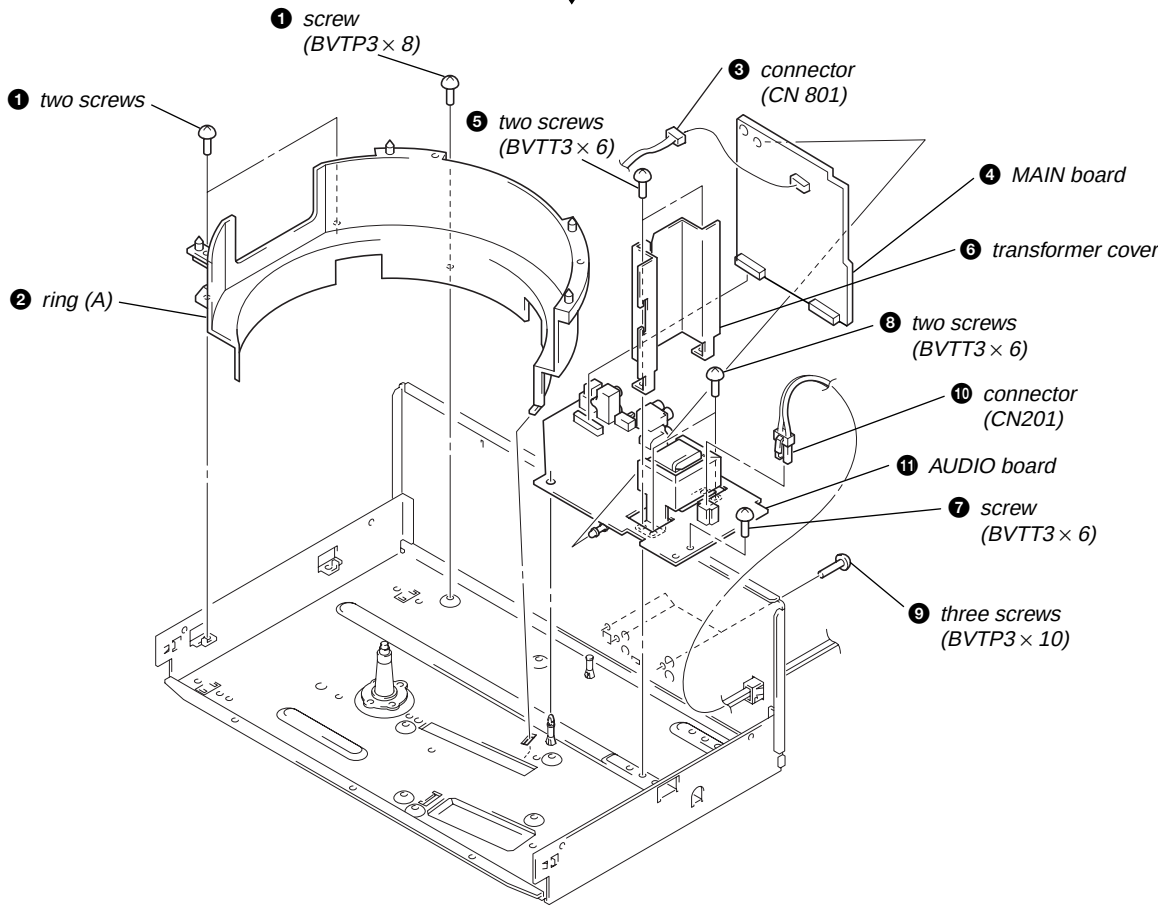
TABLE (50)



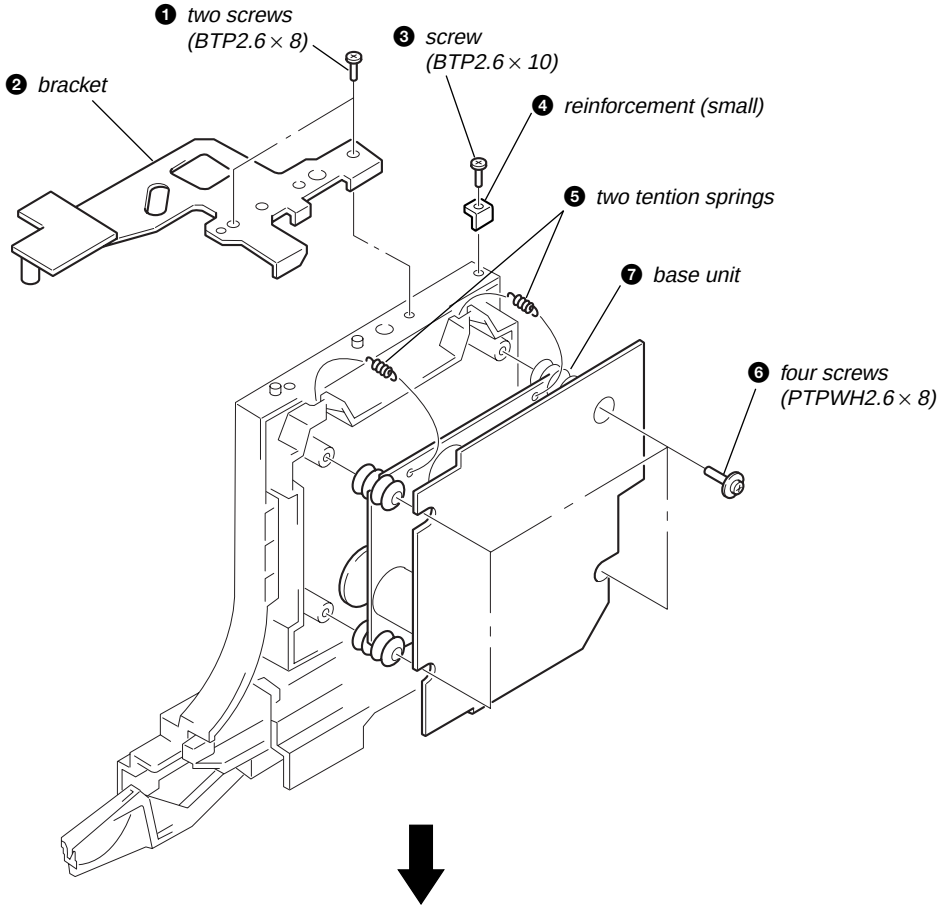
CD MECHANISM DECK SECTION


❷ reinforcement
❸ two screws (BVTP3 × 8)
❺ two screws (BVTT3 × 10)
❻ connector (CN53)
❹ ring (B)
❽ base (LOADING)
❾ screw (P3 × 14)
❿ connector (CN51)
❼ wire (flat type) (16 core) (CN102)
❿ connector (CN52)
❼ wire (flat type) (9 core) (CN103)
❾ screw (BVTT3 × 8)
❺ screw (BVTT3 × 6)
⓫ connector (CN61)
❻ connector (CN54)
❶ screw (BVTT3 × 6)
⓬ base (CDM)

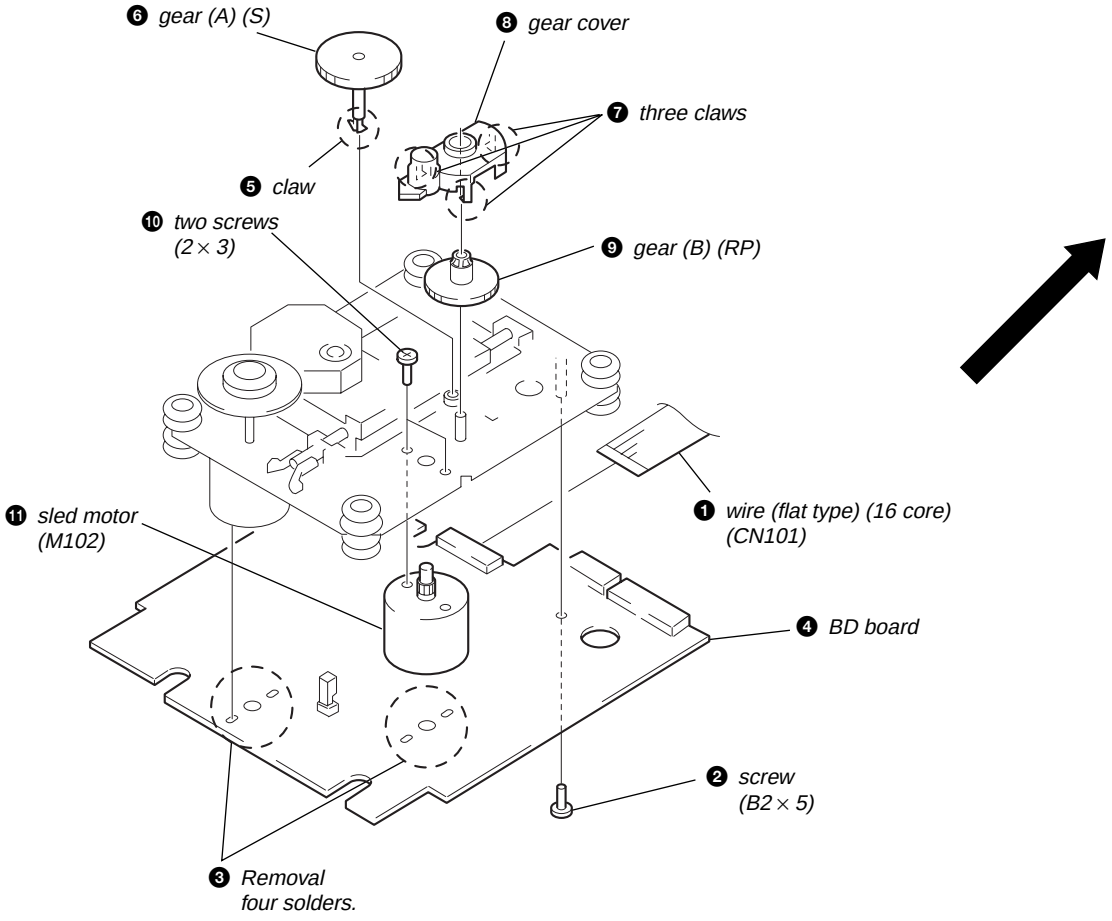
AUDIO BOARD, MAIN BOARD


❶ screw (BVTP3 × 8)
❸ connector (CN 801)
❶ two screws
❺ two screws (BVTT3 × 6)
❹ MAIN board
❻ transformer cover
❷ ring (A)
❽ two screws (BVTT3 × 6)
❿ connector (CN201)
⓫ AUDIO board
❼ screw (BVTT3 × 6)
❾ three screws (BVTP3 × 10)

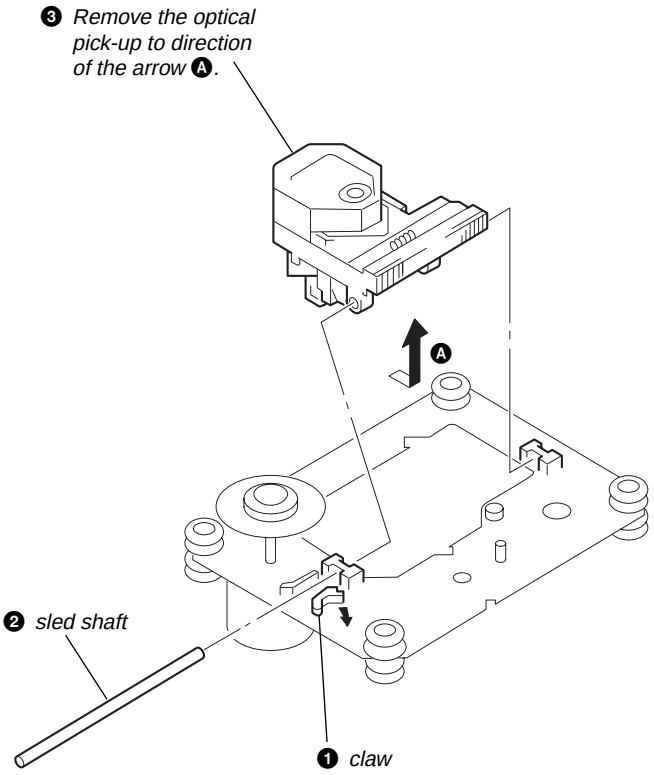
BASE UNIT



BD BOARD, SLED MOTOR (M102)



OPTICAL PICK-UP (KSS-213B/S-N)



SECTION 4
TEST MODE

ADJ MODE

1. Press the I/⏻ button to turn ON the power, and open the front cover.
2. Place the CD on the slit, close the front cover, and chuck the the CD.
3. Press the I/⏻ button to turn OFF the power.
4 Disconnect the power supply from the outlet.
5. Short-circuit the test point (TP ADJ) and test point (TP GND) of the MAIN board with a lead wire.
6. Insert the power plug into the outlet.
   The CD is played back automatically and the ADJ mode is set.

- Prohibits high speed search during accessing
- Ignores even if GFS becomes L

ADJ Mode Special Function Table

(The buttons shown in the ( ) function only when the remote commander provided is used.)

Button	Function
(3)	Tracking servo, sled servo OFF
(8)	Tracking servo, sled servo ON
CHECK	Observation mode during S
CLEAR	Automatic eccentricity measurement (Not used for servicing)

Display of special functions in ADJ mode

- Observation mode during S
  When this mode is set, the below will be displayed. *1

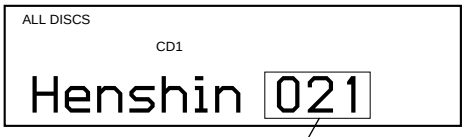
*1

- Automatic eccentricity measurement (Not used for servicing)
  When this mode is set, the below will be displayed.The Sokuteichu count down display will be counted down from 4 to to 1 *2.After counting down, the eccentricity value will be displayed *3.

*2

Sokuteichu count down display

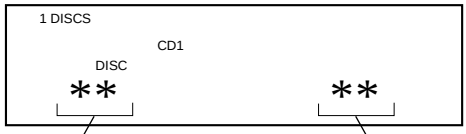
*3



Eccentricity value

FLUORESCENT INDICATOR TUBE, LED ALL LIT, AND KEY CHECK MODE

1. Short-circuit the test point (TP ADJ) and test point (TP AFADJ) of the MAIN board with a lead wire.
2. Insert the power plug into the outlet. The whole fluorescent indicator tube lights up.
   When the SRAM is faulty, “SRAMNG” will be displayed.
3. Pressing the I/⏻ button sets the key check mode.
   All buttons have individual button numbers.
   When a button is pressed, the button number is counted up and displayed.

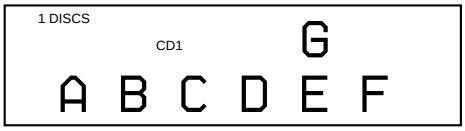


Count up display *Displays button number*

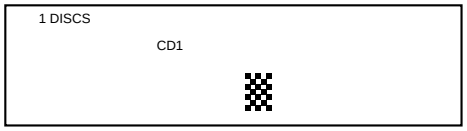
Buttons and Corresponding Button Numbers

Button	Button Number or Display
CLEAR	0
CHECK	1
FADER	2
MEMO SEARCH	3
INPUT	4
TIME/TEXT	5
PUSH ENTER	6
▷▷I	8
I◁◁	9
REPEAT	14
PLAY MODE	15
I/⏻	16
X-FADE	17
NO DELAY	18
GROUP 5	24
GROUP 4	25
GROUP 3	26
GROUP 2	27
GROUP 1	28
GROUP FILE	29
PUSH OPEN (DOOR SW ON)	STANDBY LED OFF
PUSH OPEN (DOOR SW OFF)	STANDBY LED ON
▷	All lit (LED lights up)
II	Partially lit 1 (LED lights up)
■	Partially lit 2
PLUS ONE	LED lights up
MEGA CONTROL	Partially lit 3 (LED lights up)
DISC/CHARACTER	Partially lit 4 Each time JOG is rotated, GROUP FILE 1 2 3 4 5 is displayed on the fluorescent indicator tube, and 1, 2, 3, 4, 5 light up one by one, and GROUP LED 1, 2, 3, 4, 5 lights up one by one. Clockwise : GROUP FILE 1→2→3→4→5 Counterclockwise : GROUP FILE 5→4→3→2→1

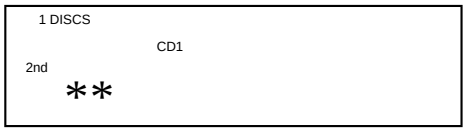
Partially lit 1



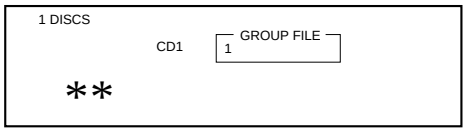
Partially lit 2



Partially lit 3



Partially lit 4



FLUORESCENT INDICATOR TUBE AND LED CHECK MODE

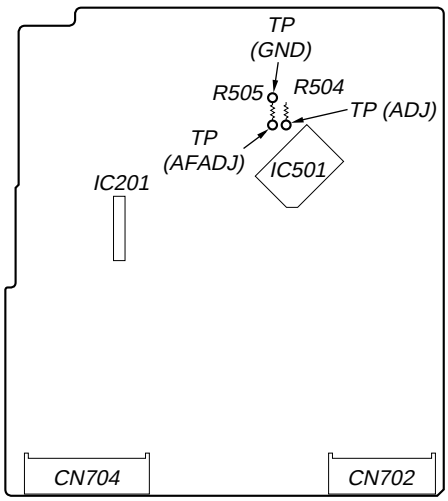
This mode is set by pressing the I/⏻ button while pressing the CHECK and PLUS ONE buttons in order in the power-off (standby) state.
The whole fluorescent indicator tube lights up, and the STANDBY, MEGA CONTROL, GROUP1-5, PLUS ONE, ▷ and ❚❚ LEDs light up.
This mode can be exited by pressing the I/⏻ button.

SHIPMENT MODE
(Set to this mode when returning the unit to the user.)

This mode is set by pressing the I/⏻ button while pressing the PUSH ENTER and PLUS ONE buttons in order in the power-off (standby) state.
The power goes off automatically after the SRAM is all-erased and the BD is opened (loading out state).

Test points and connecting points:

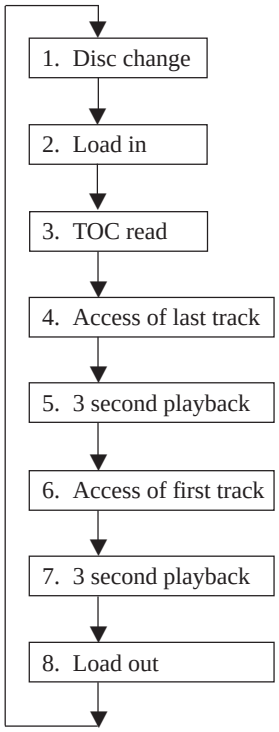
[MAIN BOARD] – CONDUCTOR SIDE –



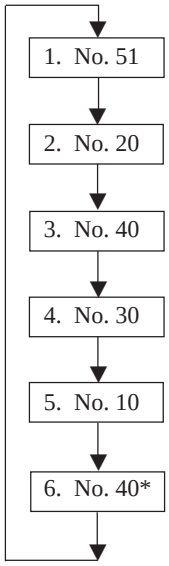
AGING MODE

- Mode which repeatedly changes and plays back discs automatically in the unit.
- It will repeat aging as long as no errors occur.
- If an error occurs during aging, it will stop all servos, motors, etc. instantaneously, display the error number, and stop operations. However, the stopping conditions differ according to whether the unit is equipped with the "self-protection function during errors" described later.
  The function serves to maintain the state of the unit when errors occur.

Sequence of Aging Mode



Order of Disc Change
(1 cycle takes 3 minutes)



* DISC No. 40 chucks twice during one cycle.
To differentiate, the "2nd" on the block indicator of the fluo rescent indicator tube will light up during the second chucking.

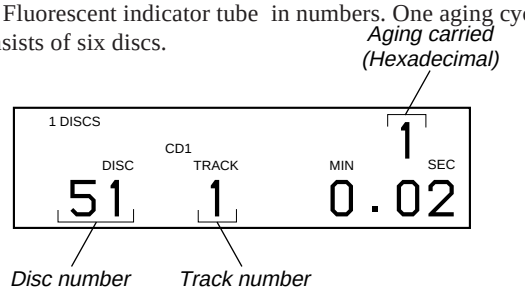
Special Functions in Aging Mode

There are some useful function in the aging mode.
- Disc setting mode*1
- Switching of use/disuse of protection function in errors *2
- Aging cycle count function *3

*1 Disc setting mode:
5 discs are set before setting the aging mode. This mode makes the setting of these discs more easy.

*2 Switching of use/disuse of protection function in errors:
Function which voluntarily corrects errors which occur during normal operations by retries.
If this function is not provided, all operations will be stopped without retiring. It is suitable for checking errors with low reproducibility.
If this function is provided, and errors can be corrected by retries, aging will be continued without stopping.
(The normal aging should be performed with "be".)

*3 Aging cycle count function:
Functions which displays the number of agings carried out on the Fluorescent indicator tube in numbers. One aging cycle consists of six discs.



Aging procedure:

Some operating method will be changed depending on if the following jig for the aging mode exists or not.

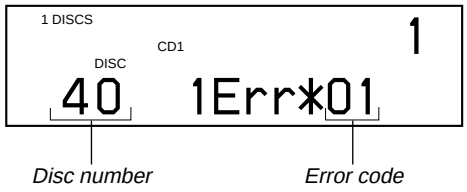
- Jig

Parts. No	Description
J-2501-123-A	Remote commander (For aging mode)

With remote commander for aging mode:

1. Turn ON the power of the unit. Open the front cover.
2. Press the [AGING START] button of the remote commander for aging mode.
3. When the disc set mode is set, the [▷] and [❚❚] LEDs blink.
4. Rotate the JOG dial. The slits (No. 10, 20, 30, 40, 51) for setting the discs will come forward. Insert the discs into these slits. Do not set the discs in other slits.
5. Set the use/disuse of the self protection function in errors. Press the [REPEAT] button. When REPEAT is displayed on the fluorescent indicator tube, the self protection function during the error will become "Use".
   If the REPEAT display is OFF, it means that the function is not used. (Normally set to "Use" when performing aging.)
6. Press the [▷] button.
7. The [▷] LED blinks, the aging mode is set, and aging is started.
8. The aging cycle lasts 3 minutes. When problems occur during aging, the error number will be displayed on the fluorescent indicator tube, and the [❚❚] LED will light up.
   (Refer to the following table for the details of the errors.)
9. Aging will be repeated as long as no errors occur.
10. After each aging cycle, the number displayed on the Fluorescent indicator tube will increase.
11. To end aging, press the [I/⏻] button

Error Display



Without remote commander for aging mode:

1. Turn ON the power of the unit. Open the front cover.
2. Press the [PLAY MODE], [▷], and [⏮] buttons in order.
3. When the disc set mode is set, the [▷] and [❚❚] LEDs blink.

The following procedure is the same as in the case "With remote commander for aging mode".

Error code

Code number	Name	Contents
Err 01	DISC sensor check 1	No disc in the specified slit
Err 02	DISC sensor check 2	Disc in other slits
Err 03	———————	No function
Err 04	Table operation check 2	No table sensor input
Err 05	Loading operation check 1	Load in timeover
Err 06	Loading operation check 2	Load out timeover
Err *1	BU related check 1	Access timeover
Err *2	BU related check 2	High speed search NG
Err *3	BU related check 3	Q data read error
Err *4	BU related check 4	BU operation (From focus search to until signal can be read) timeover
Err *5	BU related check 5	GFS monitor error
Err *6	BU related check 6	Focus cannot be imposed by focus search

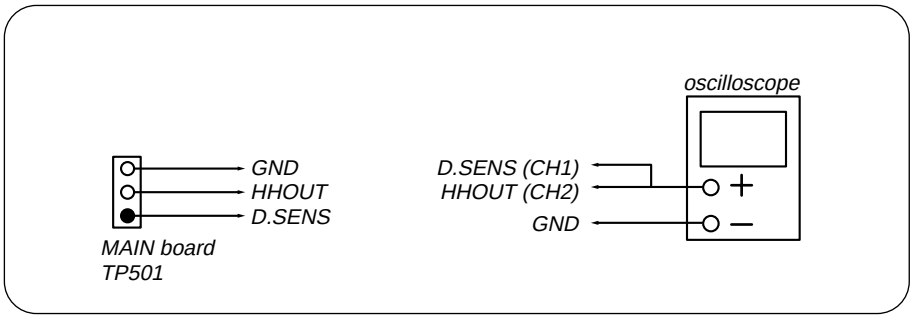
The * numbers mean the following according to the state of the unit during aging
2 : From checking to end of TOC read
3 : From end of TOC read to end of last track playback
4 : From end of last track playback to end of first track playback

SECTION 5
MECHANICAL ADJUSTMENTS

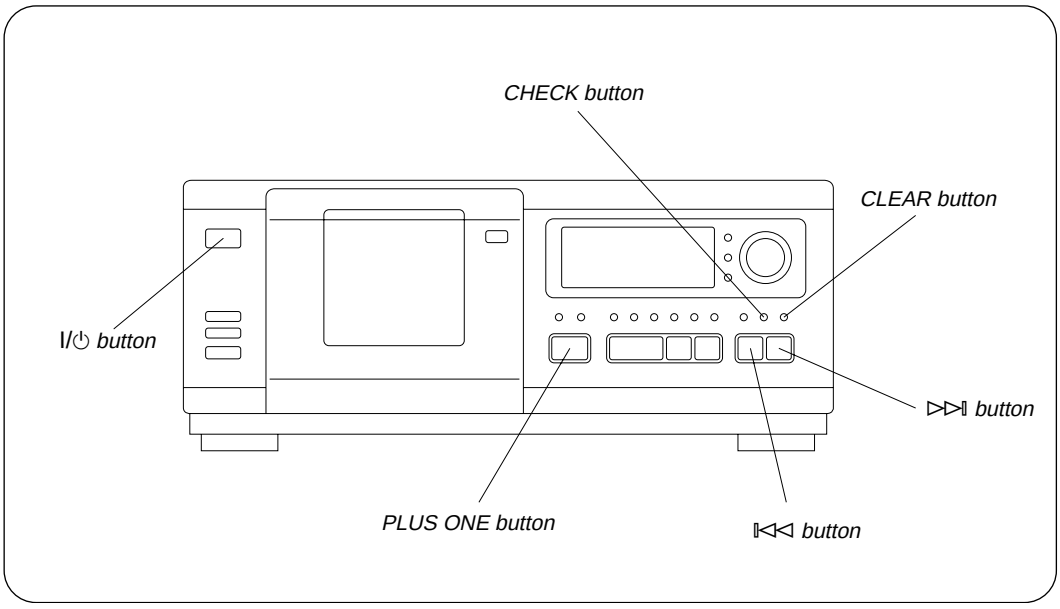
To adjust the mechanism section, enter the mechanism section adjustment mode.
For how to enter the mechanism section adjustment mode, refer to each adjustment section.

DISC SENSOR ALIGMENT

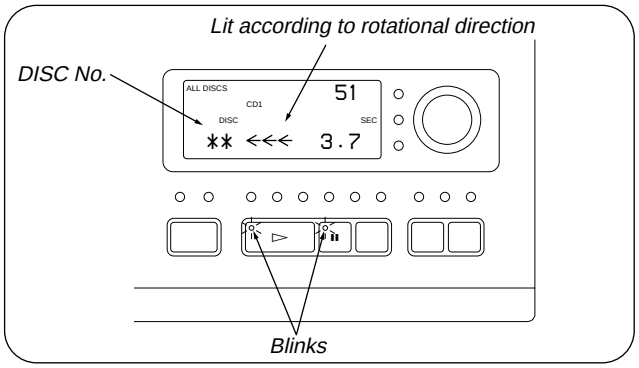
1. Make sure that there is no disc in the unit.
2. Connect an oscilloscope to TP501 of the MAIN board.

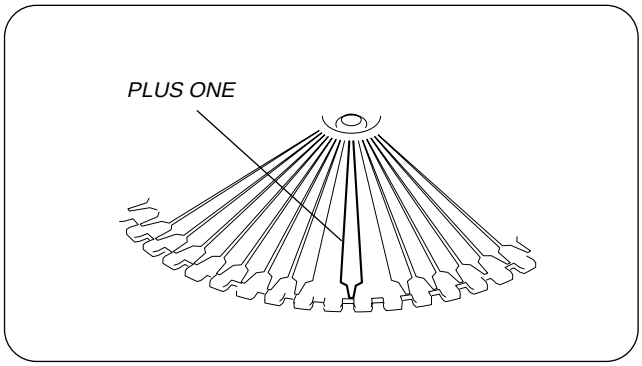


3. While pressing the CLEAR and PLUS ONE buttons at the same time and turn ON the power.



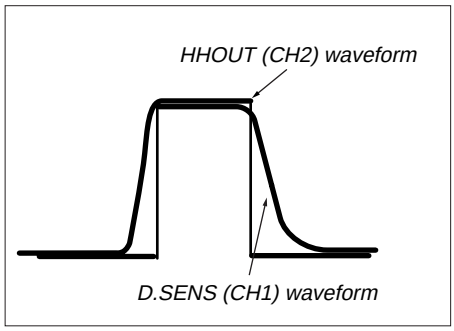
4. The fluorescent indicator tube shows as follows, and the mechanism section adjustment mode is set.

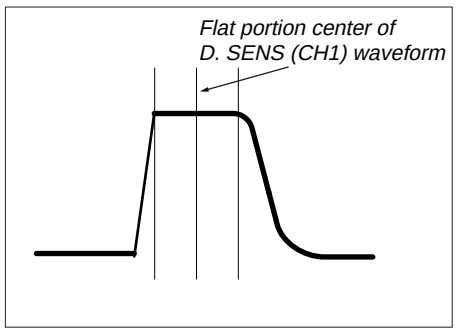


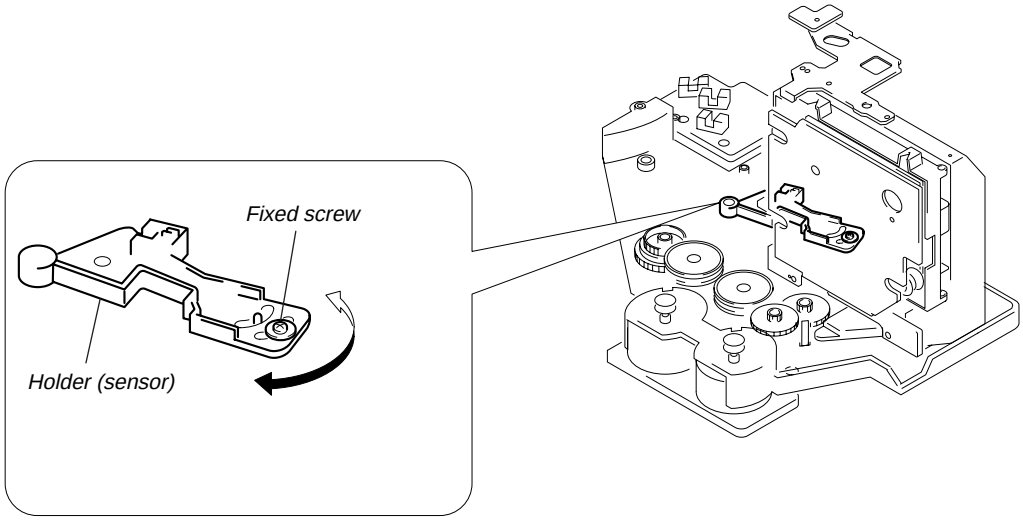


5. The disc table rotates in the clockwise direction. The disc table rotation time is displayed with ‘’PLUS ONE” slit as a measuring point.
6. Press the CLEAR button, to be rotated the disc table counterclockwise.
7. Measure the waveform of the oscilloscope when the disc table is rotating.

8. Move the holder (sensor) center so that the flat portion center at the top of the D.SENS (CH1) input waveform and the ‘’H” center of HHOUT (CH2) coincide.



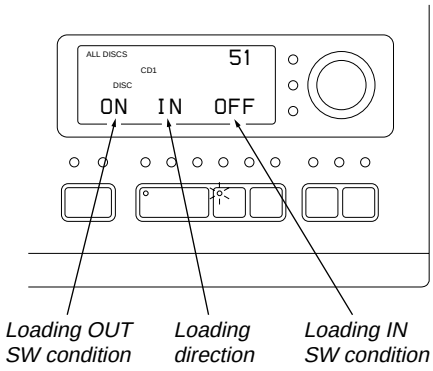




9. Tighten the fixed screw to fix the disc table, then press the CLEAR button.
10. The disc table rotates in the clockwise direction. Measure the waveform and make sure that the flat portion center at the top of the D.SENS (CH1) input waveform and the ‘’H” center of HHOUT (CH2) conform.

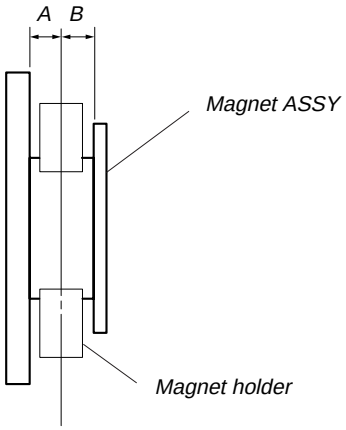
Note: During the adjustment mode, the rotational direction is switched each time the CLEAR button is pressed.
Pressing the CHECK button enters the loading mode which will be described later. Pressing the CLEAR button rotates the disc table again.

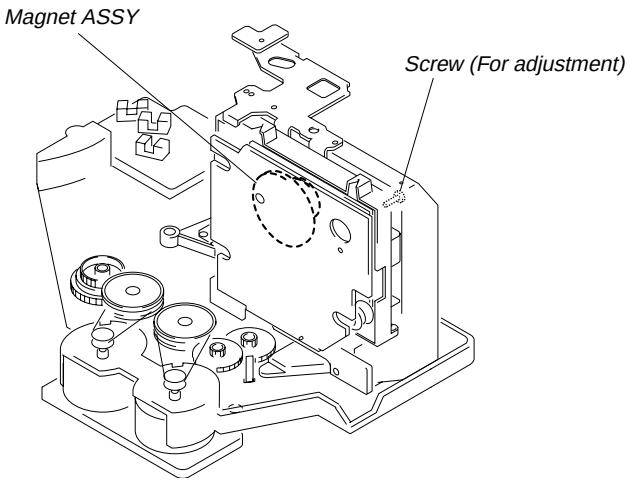
Contets of the fluorescent indicator tube's display in the loading mode



MAGNET ASSY ALIGMENT

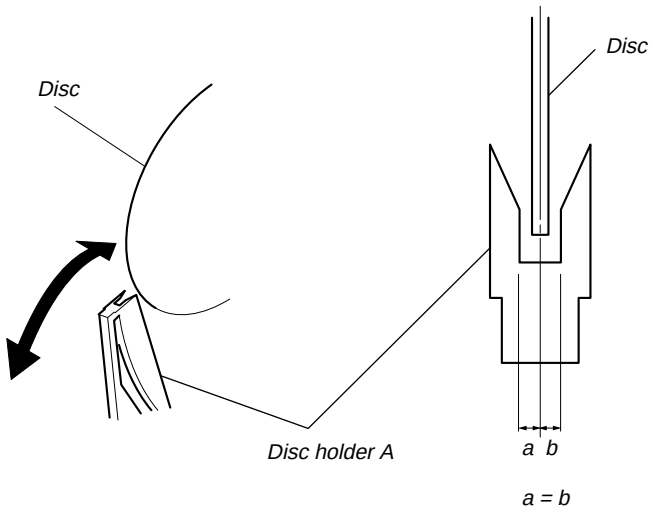
1. Check that there is no disc in the unit and then turn ON the power. Open the door, and set a disc in the PLUS ONE slit.
2. Turn OFF the power, close the door, and while pressing the CLEAR and PLUS ONE buttons simultaneously, turn ON the power again.
3. Press the CHECK button, and set the loading mode.
4. Press the ▷▷I button and chuck the disc.
5. Adjust the magnet assembly and magnet holder so that A=B as shown in the figure.



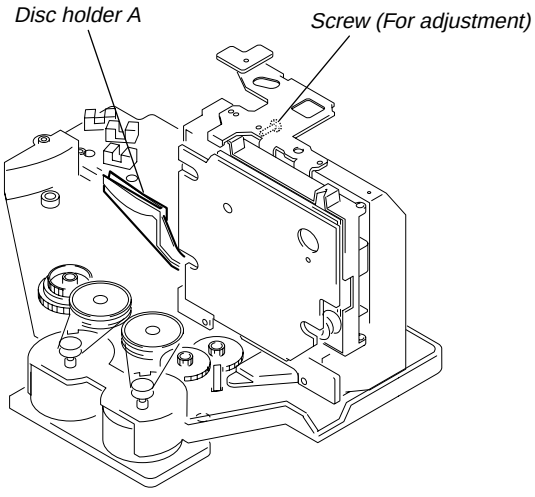


DISC HOLDER A ALIGMENT

1. Check that there is no disc in the unit and then turn ON the power. Open the door, and set a disc in the PLUS ONE slit.
2. Turn OFF the power, close the door, and while pressing the CLEAR and PLUS ONE buttons simultaneously, turn ON the power again.
3. Press the CHECK button, and set the loading mode.
4. Press the ▷▷I button and chuck the disc.
5. Press I◁◁ or ▷▷I button to stop the disc holder A slightly away from the disc.
6. Rotate and adjust the adjusting screw so that the center of the disc and that of the disc holder coincide.



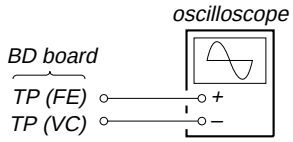
a = b



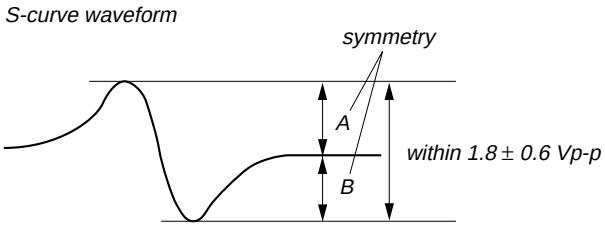
SECTION 6
ELECTRICAL ADJUSTMENTS

Note :
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



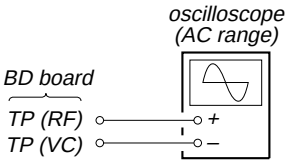
Procedure :
1. Press the I/⏻ button and turn ON the power supply.
2. Open the front cover, and press the PLUS ONE button.
3. Set the disc (YEDS-18) into the "PLUS ONE" slit.
4. Close the front cover, and chuck the disc.
5. Press the I/⏻ button and turn OFF the power.
6. Connect the oscilloscope to TP (FE) of the BD board.
7. Connect TP (ADJ) of the MAIN board and connect TP (GND) with a lead wire.
8. Press the I/⏻ button and turn ON the power.
9. The first track will be played back automatically. When the CHECK button is pressed, "S-JI mode" will be displayed on the fluorescent indicator tube, and focus search will be repeated.
10. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 1.8 ± 0.6 Vp-p.



11. Turn OFF the power, and remove the lead wire connected at step 7.

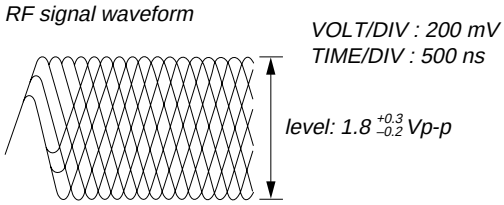
Note :
- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check



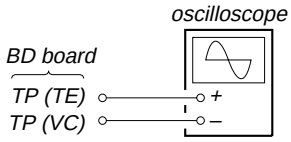
Procedure :
1. Press the I/⏻ button and turn ON the power supply.
2. Open the front cover, and press the PLUS ONE button.
3. Set the disc (YEDS-18) into the "PLUS ONE" slit.
4. Close the front cover, and chuck the disc.
5. Press the I/⏻ button and turn OFF the power.
6. Connect the oscilloscope to TP (RF) of the BD board.
7. Connect TP (ADJ) of the MAIN board and connect TP (GND) with a lead wire.
8. Press the I/⏻ button and turn ON the power.
9. Playback the fifth track of the disc.
10. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.
11. Turn OFF the power, and remove the lead wire connected at step 7.

Note : A clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

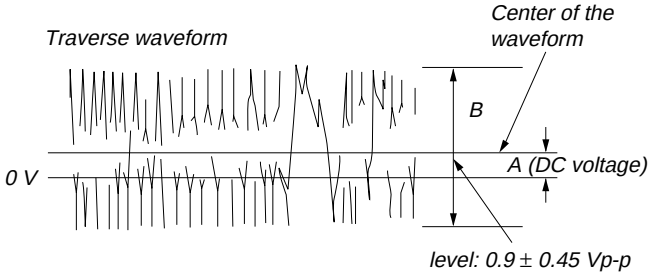


E-F Balance (Traverse) Check

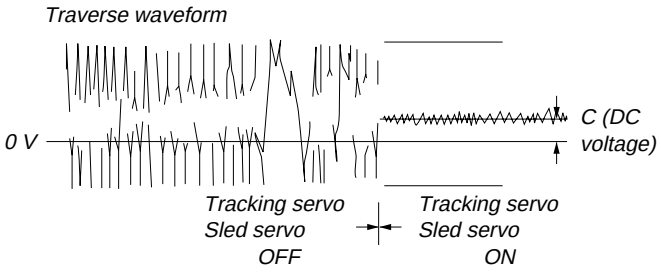
The procedure for this checking method differs for when a general remote control unit is used and not used.



When a general remote commander is used:
1. Press the I/⏻ button and turn ON the power supply.
2. Open the front cover, and press the PLUS ONE button.
3. Set the disc (YEDS-18) into the "PLUS ONE" slit.
4. Close the front cover, and chuck the disc.
5. Press the I/⏻ button and turn OFF the power.
6. Connect the oscilloscope to TP (TE) of the BD board.
7. Connect TP (ADJ) of the MAIN board and connect TP (GND) with a lead wire.
8. Press the I/⏻ button and turn ON the power.
9. Playback the fifth track of the disc.
10. Press the 3 button on the remote commander. (The tracking servo and the sledding servo are turned OFF.)
11. Check the level B of the oscilliscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
    Confirm the following :
    A/B x 100 = less than ± 10%



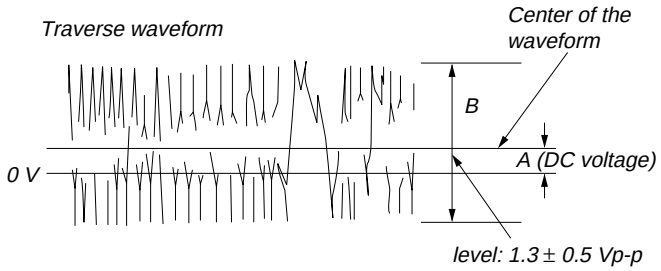
12. Press the 8 button on the remote control unit. (The tracking servo and sledding servo are turned ON.) Confirm the C (DC voltage) is almost equal to the A (DC voltage) is step 11.



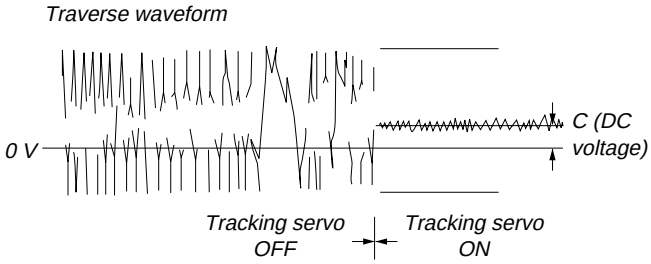
13. Turn OFF the power, and remove the lead wire connected at step 7.

When a general remote commander is not used:

1. Solder lead wires to TP (DVDD) and TP (TOFF) on the BD board severally.
2. Connect the oscilloscope to TP (TE) of the BD board.
3. Press the I/⏻ button and turn ON the power supply.
4. Open the front cover, and press the PLUS ONE button.
5. Set the disc (YEDS-18) into the “PLUS ONE” slit.
6. Close the front cover, and chuck the disc.
7. Playback the fifth track of the disc.
8. Short-circuit the lead wire connected at step 1. (The tracking servo is turned OFF)
9. Check the level B of the oscilliscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
   Confirm the following :
   A/B x 100 = less than ± 10%



10. Disconnect the lead wire short-circuited at step 8. (The tracking servo is turned ON.) Confirm the C (DC voltage) is almost equal to the A (DC voltage) is step 8.

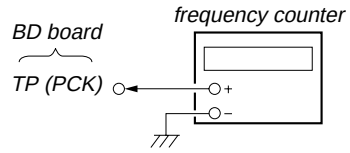


11. Turn OFF the power, and remove the lead wire connected at step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect the frequency counter to TP (PCK) of the BD board.



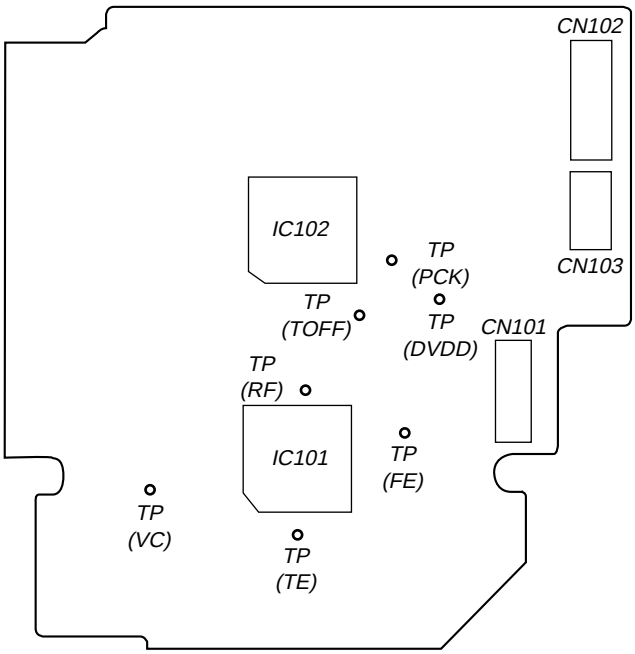
2. Press the I/⏻ button and turn ON the power supply.
3. Open the front cover, and press the PLUS ONE button.
4. Set the disc (YEDS-18) into the “PLUS ONE” slit.
5. Close the front cover, and chuck the disc.
6. Playback th e fifth track of the disc.
7. Confirm that reading on frequency counter is 4.3218 MHz ± 30 kHz.

About RV601 on the MAIN board

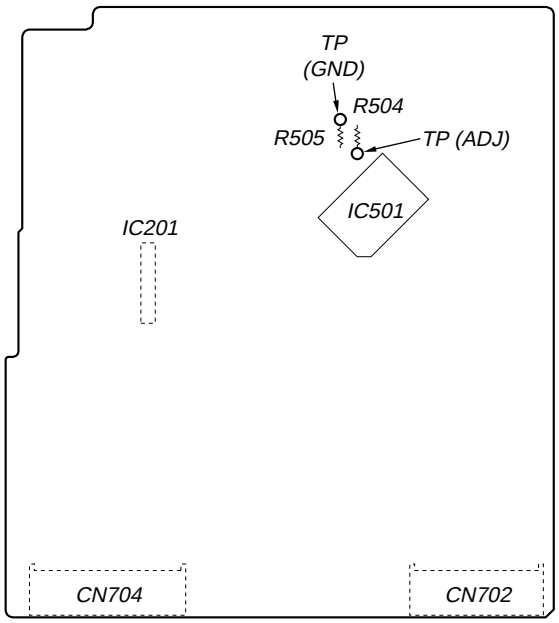
RV601 of the MAIN board requires no adjustments. Please note that it should be dixed to mechanical center position when you moved and do not know origin position.

Adjustment Location :

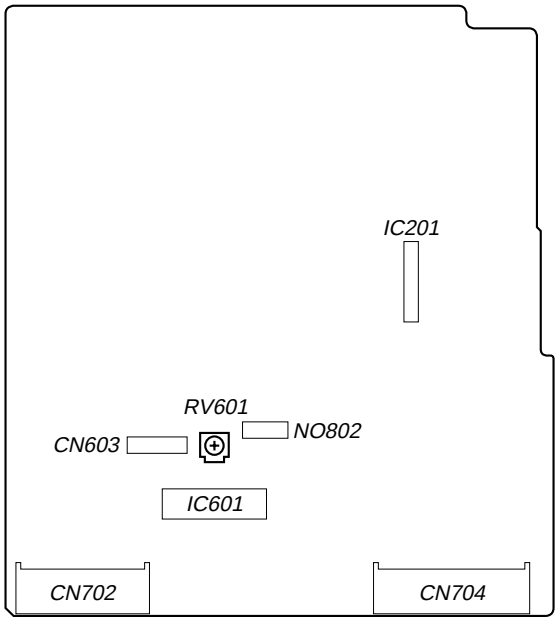
[BD BOARD] — CONDUCTOR SIDE —



[MAIN BOARD] — CONDUCTOR SIDE —

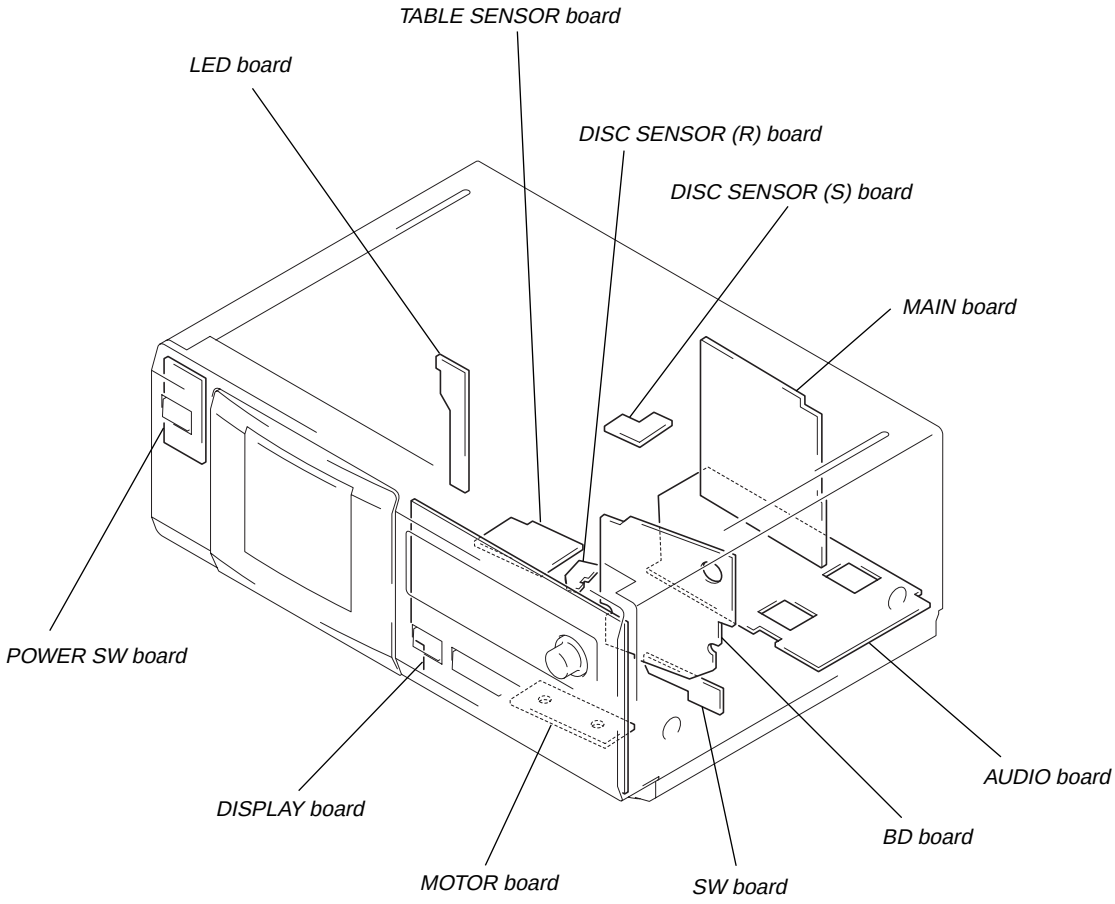


[MAIN BOARD] — COMPONENT SIDE —



SECTION 7
DIAGRAMS

• Circuit Boards Location



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

Note on Schematic Diagram:

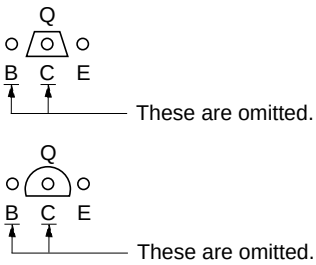
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

- **B +** : B+ Line.
- **B −** : B– Line.
- ▬ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD
  ⇨ : digital out
- Abbreviation
  AED : North European
  AUS : Australian model.
  CND : Canadian model.
  E2 : 120 V AC Area in E model.
  E3 : 240 V AC Area in E model.
  SP : Singapore model.

Note on Printed Wiring Boards:

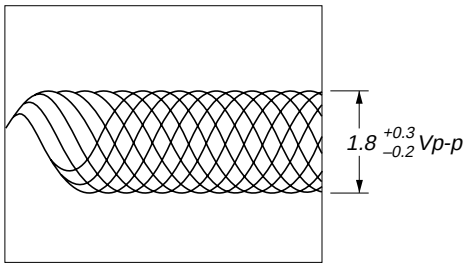
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▒▒ : Pattern from the side which enables seeing.
- ▨ : Solder bridge.
- Indication of transistor.



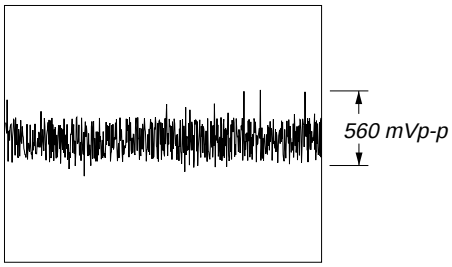
• **Waveforms**

– BD Section –

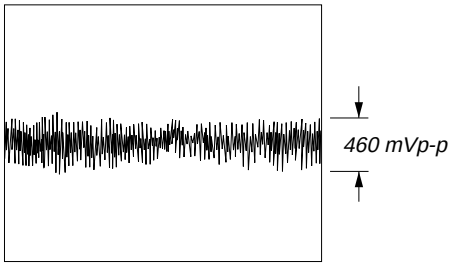
❶ IC101 ㊶ (RFSM) (PLAY MODE)



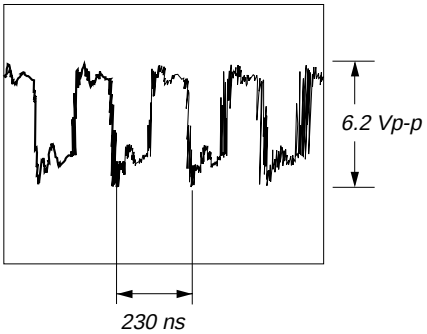
❷ IC101 ⑳ (FE) (PLAY MODE)



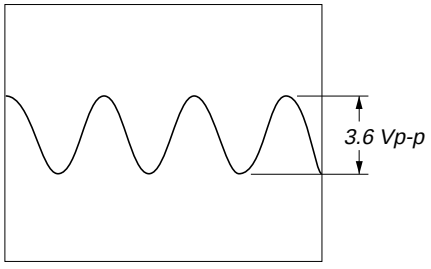
❸ IC101 ⑦ (TE) (PLAY MODE)



❹ IC102 ㉑ (PCK)

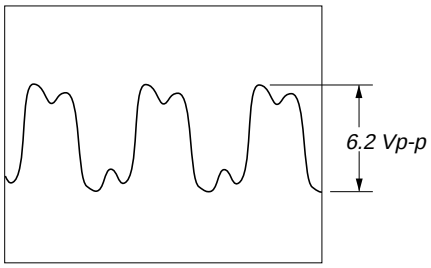


❺ IC102 ㊹ (XOUT)



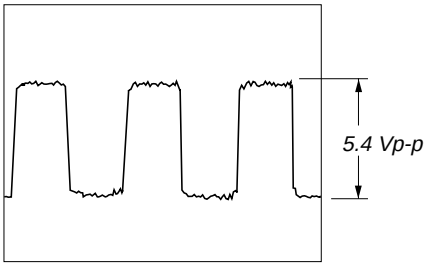
16.9344 MHz

❻ IC102 ㊿ (16M)



16 MHz

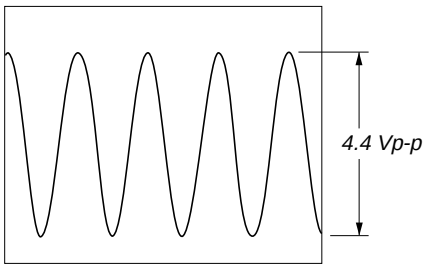
❼ IC102 ㊶ (4.2M)



4.2 MHz

– MAIN Section –

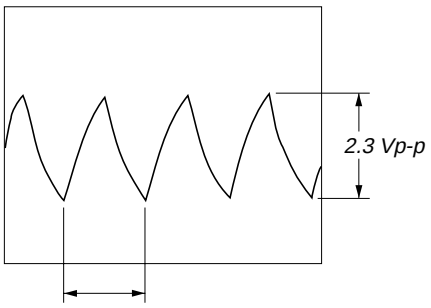
❶ IC501 ㉜ (XTAL)



10 MHz

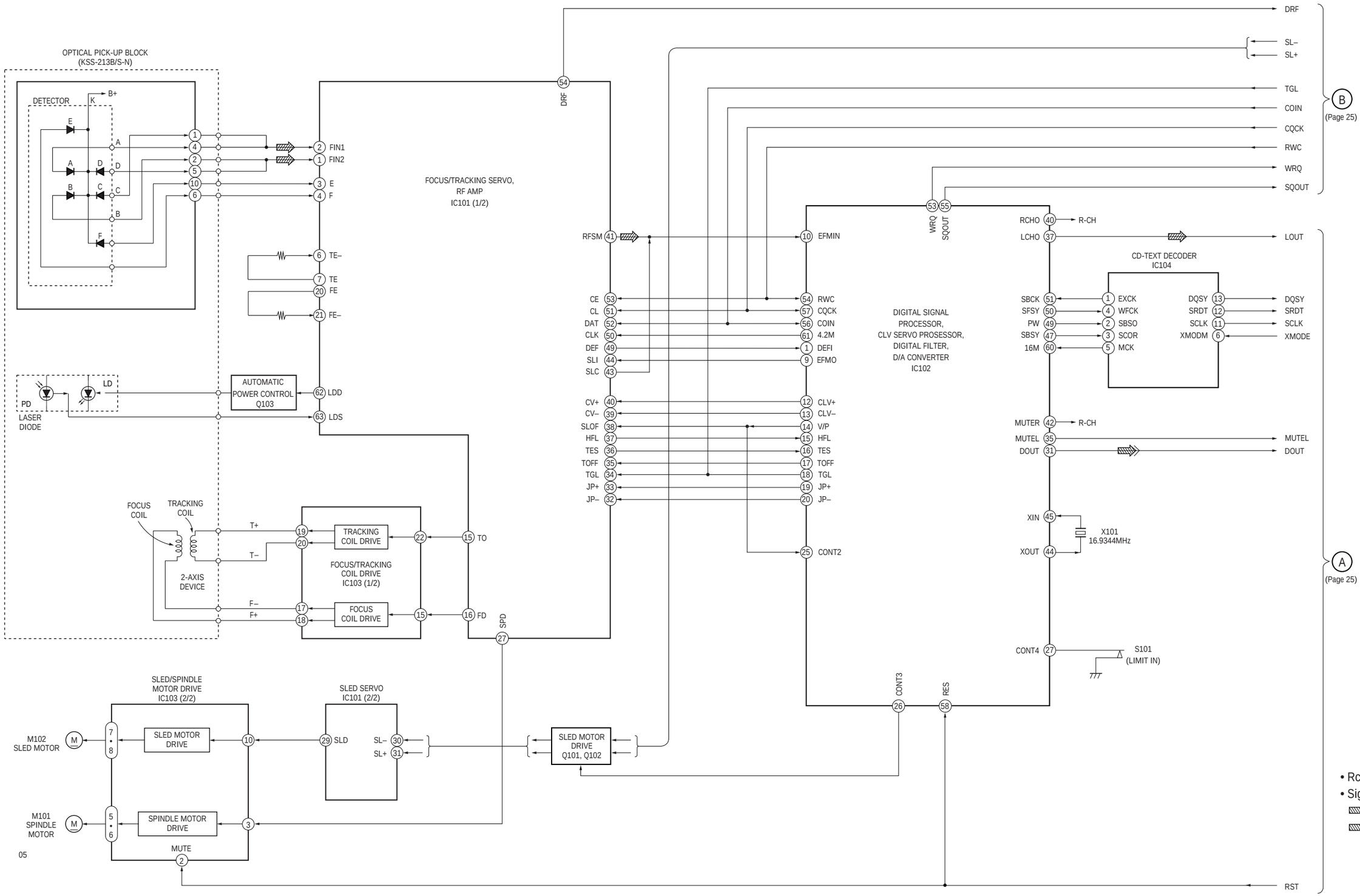
– DIAPLAY Section –

❶ IC901 ㊽ (OSC0)



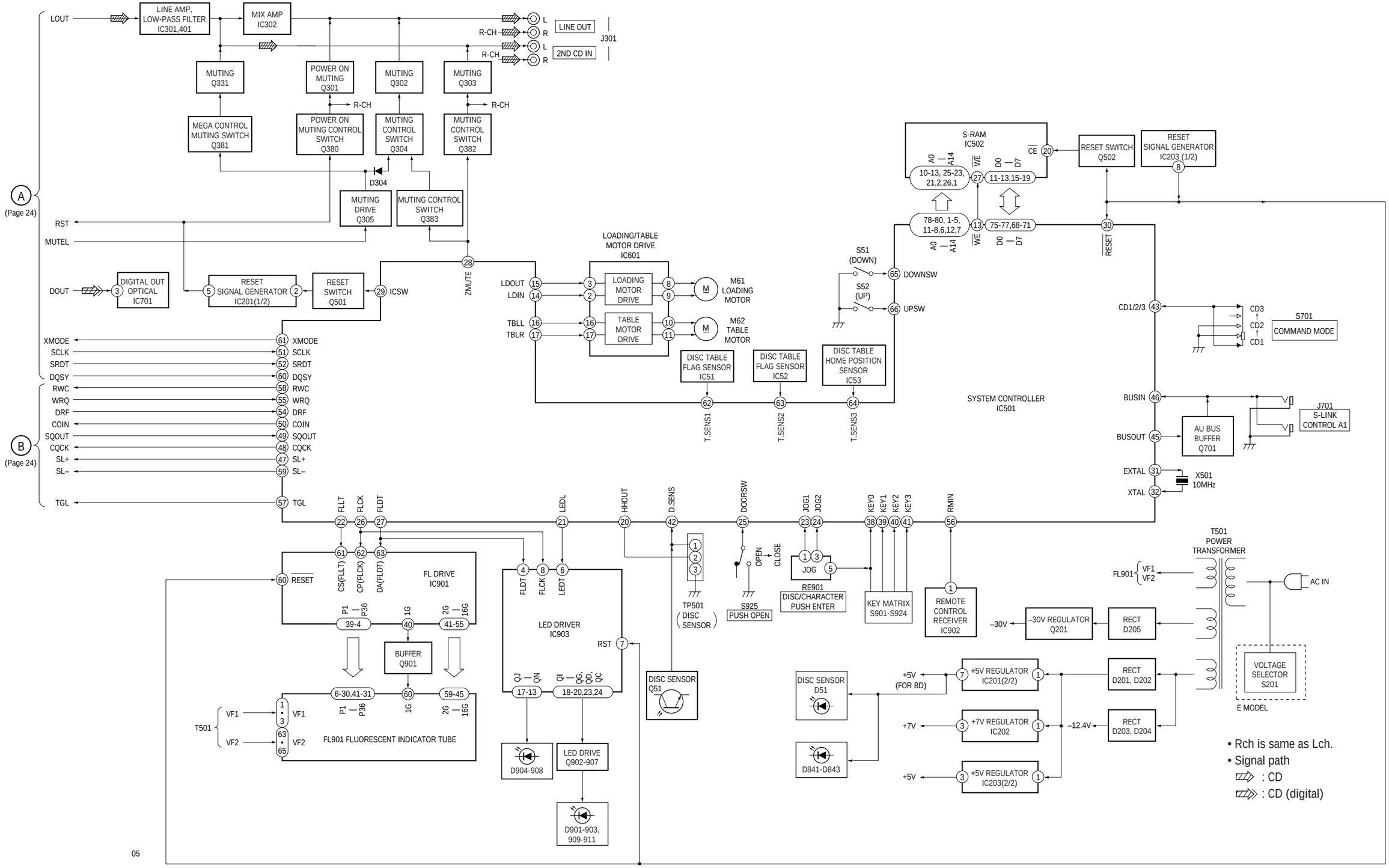
7-1. BLOCK DIAGRAMS

– BD SECTION –



• Rch is same as Lch.
• Signal Path
▨ : CD
▨: CD (digital)

– MAIN SECTION –



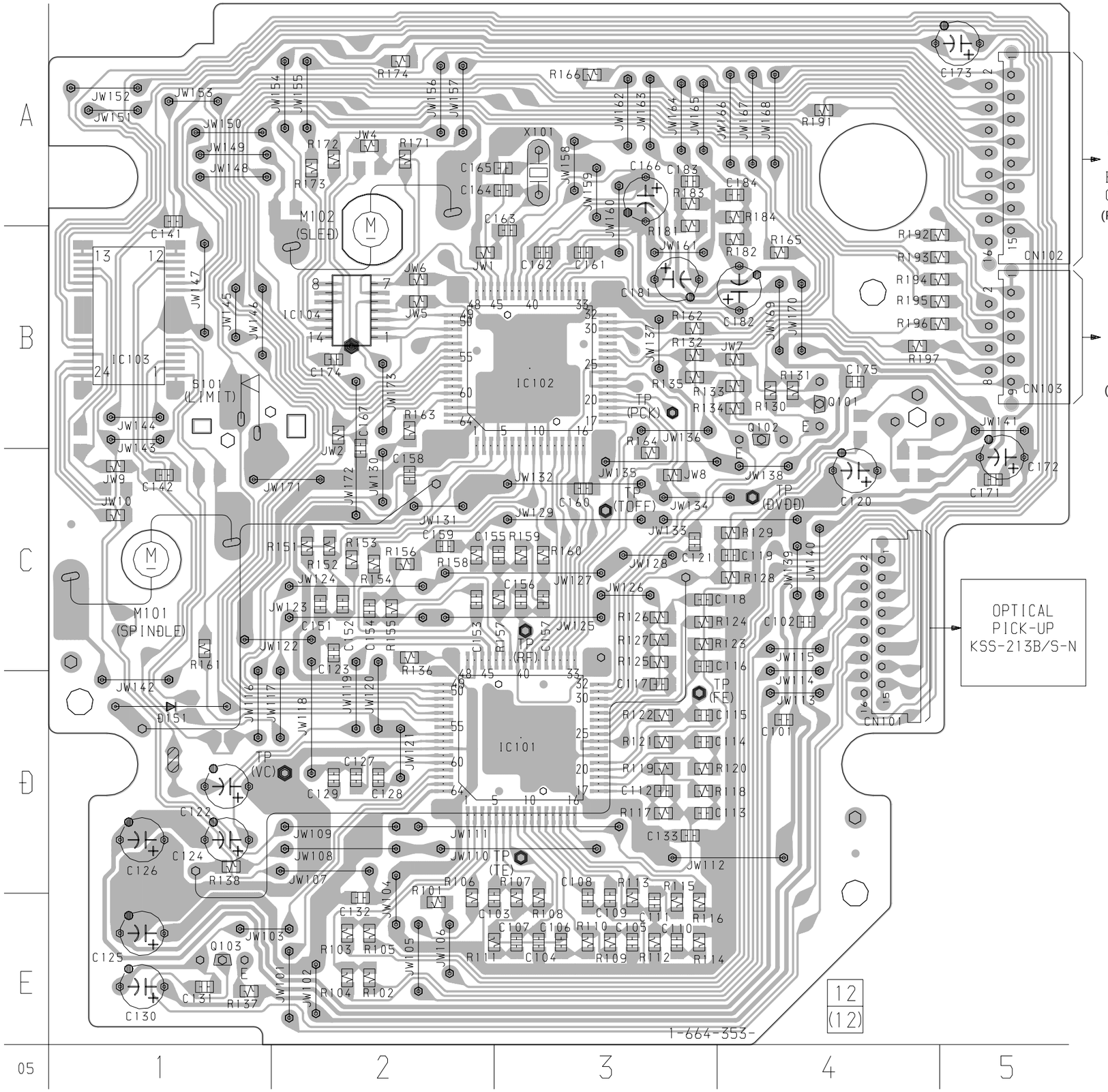
7-2. PRINTED WIRING BOARD – BD Section –

• See page 20 for Circuit Boards Location. • See page 21 for Note.

• **Semiconductor Location**

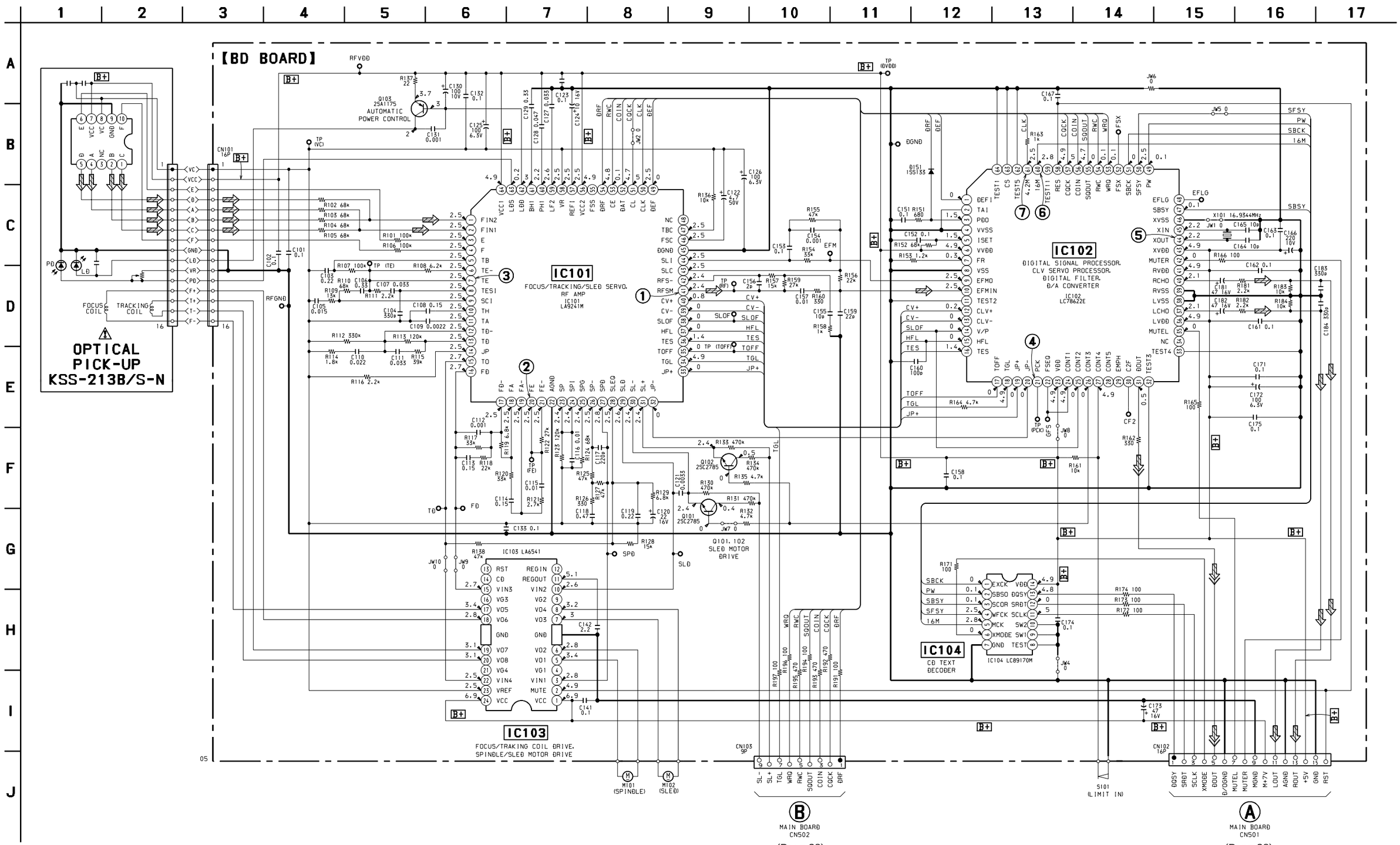
Ref. No.	Location
D151	D-1
IC101	D-3
IC102	B-3
IC103	B-1
IC104	B-2
Q101	B-4
Q102	B-4
Q103	E-1

【BD BOARD】



7-3. SCHEMATIC DIAGRAM – BD Section –

• See page 22 for Waveforms. • See page 46 for IC Block Diagrams. • See page 49 for IC Pin Function Description. • See page 21 for Note.

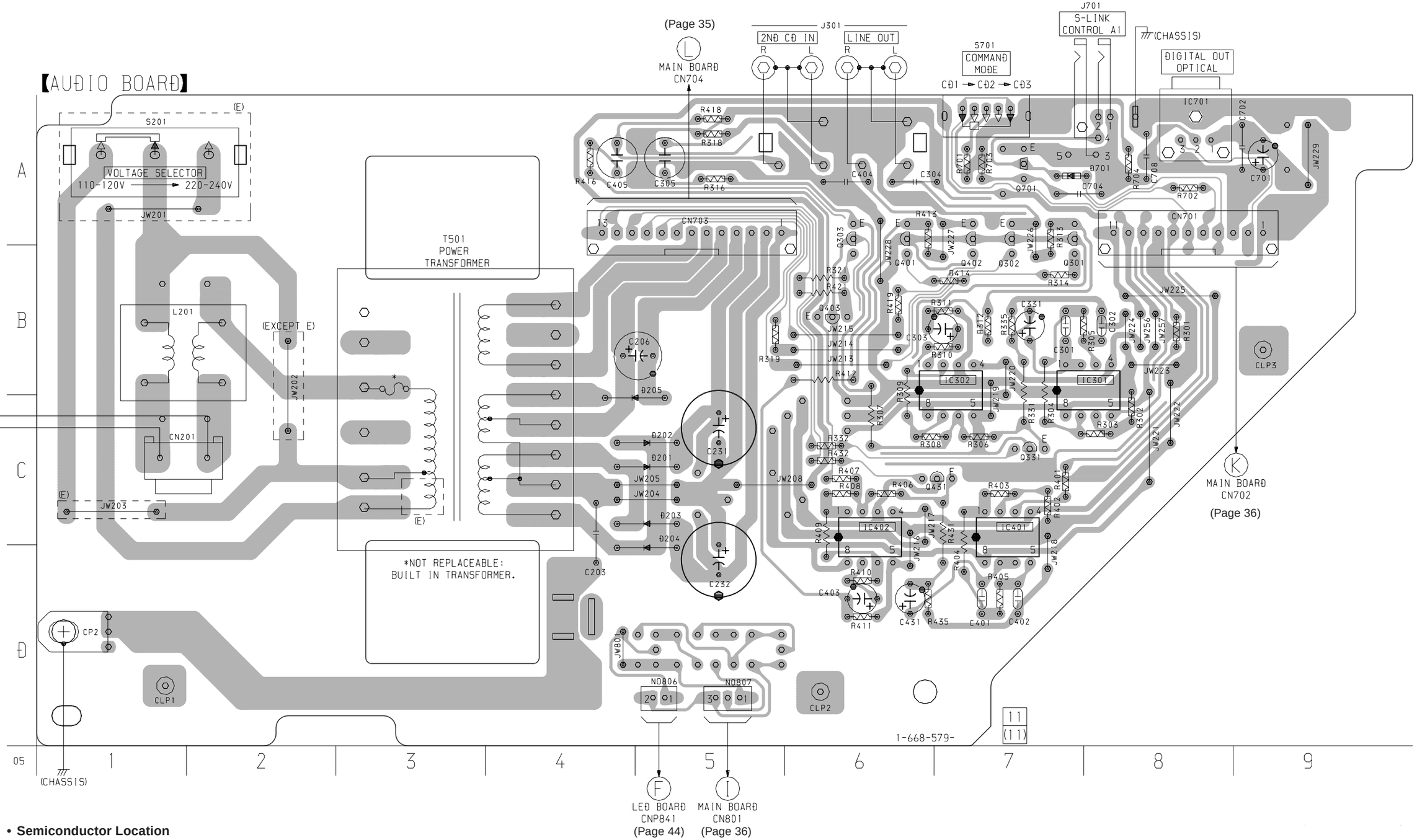


- no mark: PLAY
- Signal path.
  ⇨ : CD
  ⇨ : digital out

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

7-4. PRINTED WIRING BOARD – AUDIO Section –

• See page 20 for Circuit Boards Location. • See page 21 for Note.

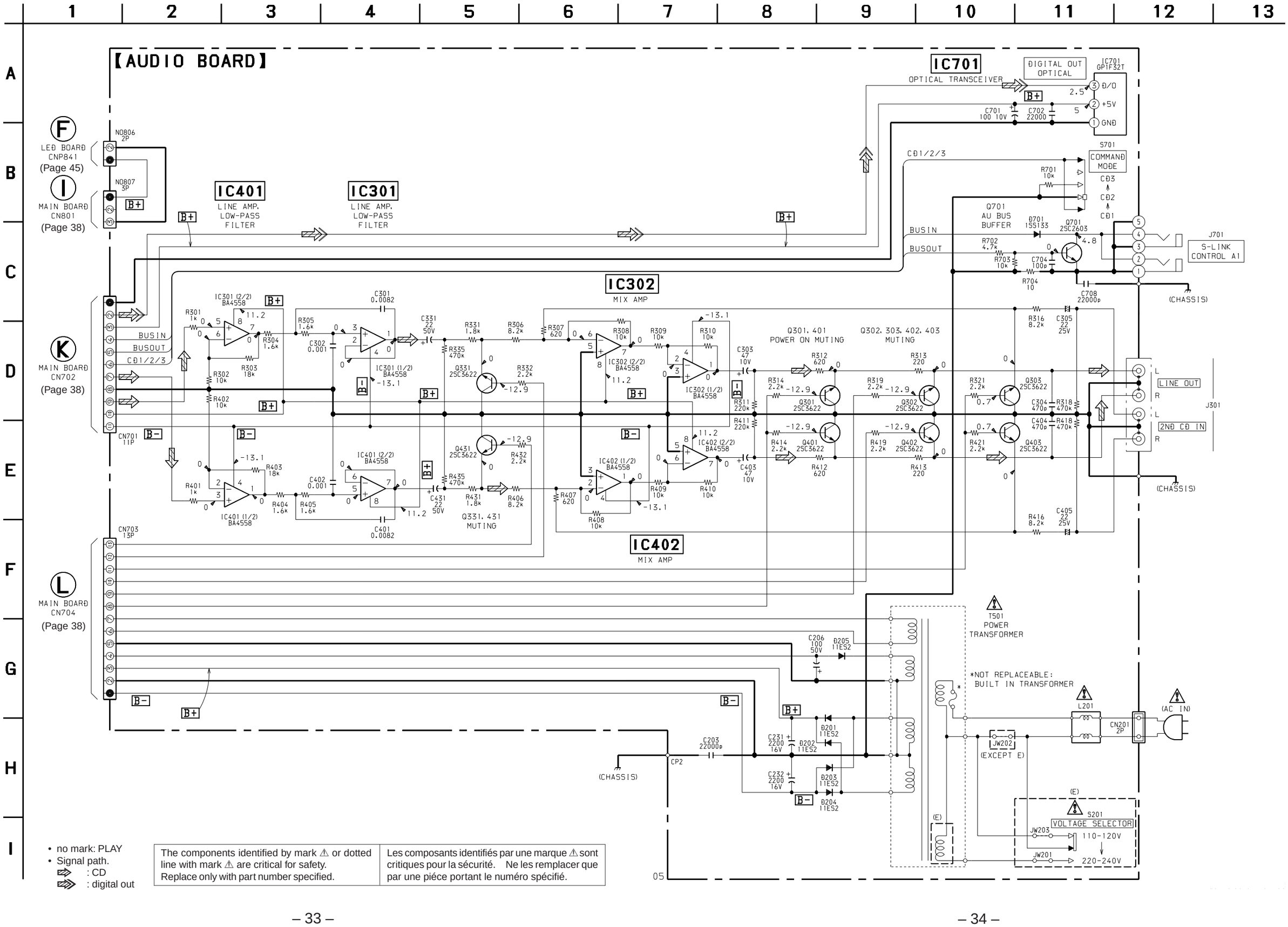


• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D201	C-5	IC701	A-8
D202	C-5		
D203	C-5	Q301	B-7
D204	D-5	Q302	B-7
D205	B-5	Q303	A-6
D701	A-7	Q331	C-7
		Q401	B-6
IC301	B-8	Q402	B-7
IC302	B-7	Q403	B-6
IC401	C-7	Q431	C-7
IC402	C-6	Q701	A-7

7-5. SCHEMATIC DIAGRAM – AUDIO Section –

• See page 21 for Note.



- no mark: PLAY
- Signal path.
  ⇨ : CD
  ⇛ : digital out

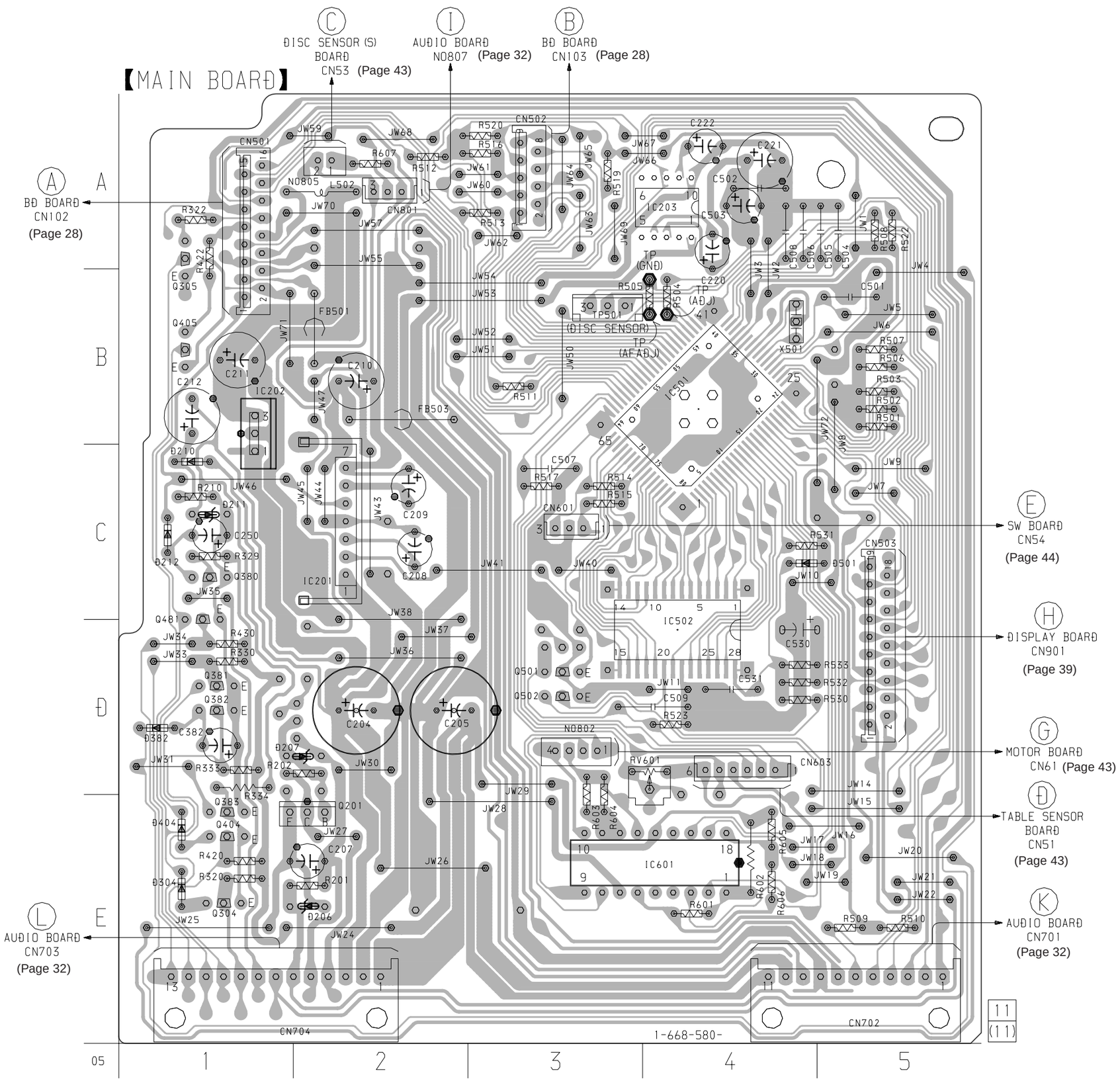
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

7-6. PRINTED WIRING BOARD – MAIN Section –

• See page 20 for Circuit Boards Location. • See page 21 for Note.

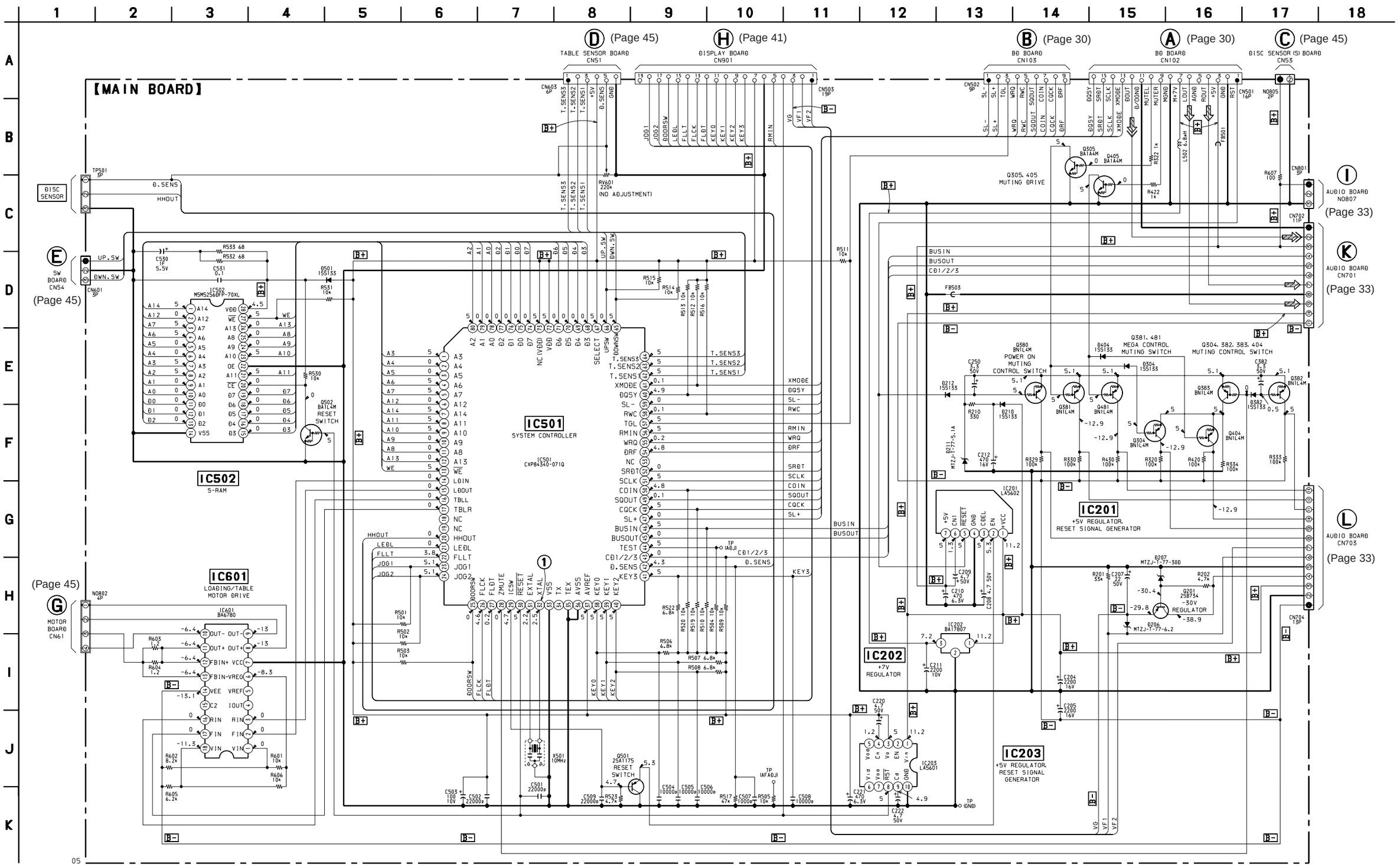
• Semiconductor Location

Ref. No.	Location
D206	E-2
D207	D-2
D210	C-1
D211	C-1
D212	C-1
D304	E-1
D382	D-1
D404	E-1
D501	C-4
IC201	C-2
IC202	B-1
IC203	A-4
IC501	B-4
IC502	D-4
IC601	E-4
Q201	E-2
Q304	E-1
Q305	A-1
Q380	C-1
Q381	D-1
Q382	D-1
Q383	E-1
Q404	E-1
Q405	B-1
Q481	C-1
Q501	D-3
Q502	D-3



7-7. SCHEMATIC DIAGRAM – MAIN Section –

• See page 22 for Waveform. • See page 47 for IC Block Diagrams. • See page 53 for IC Pin Function Description. • See page 21 for Note.

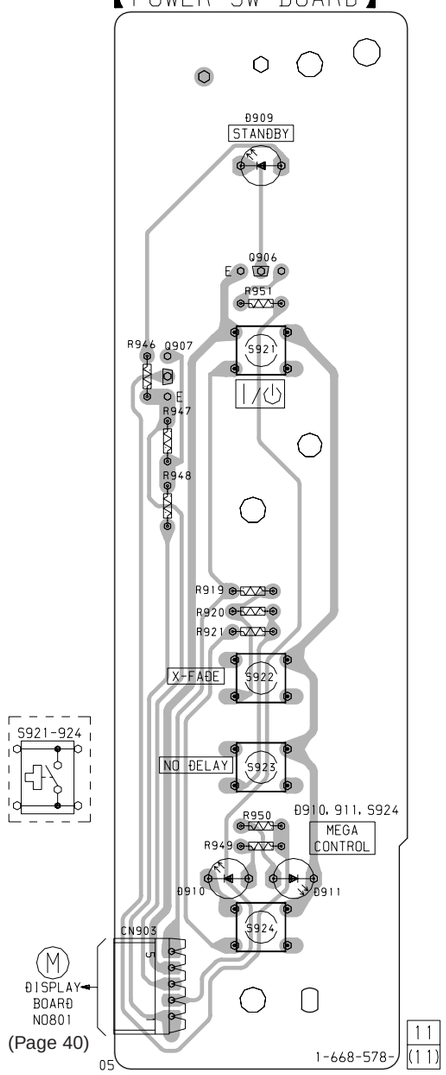


- no mark: PLAY
- Signal path.
  - ⇨ : CD
  - ⇨⇨ : digital out

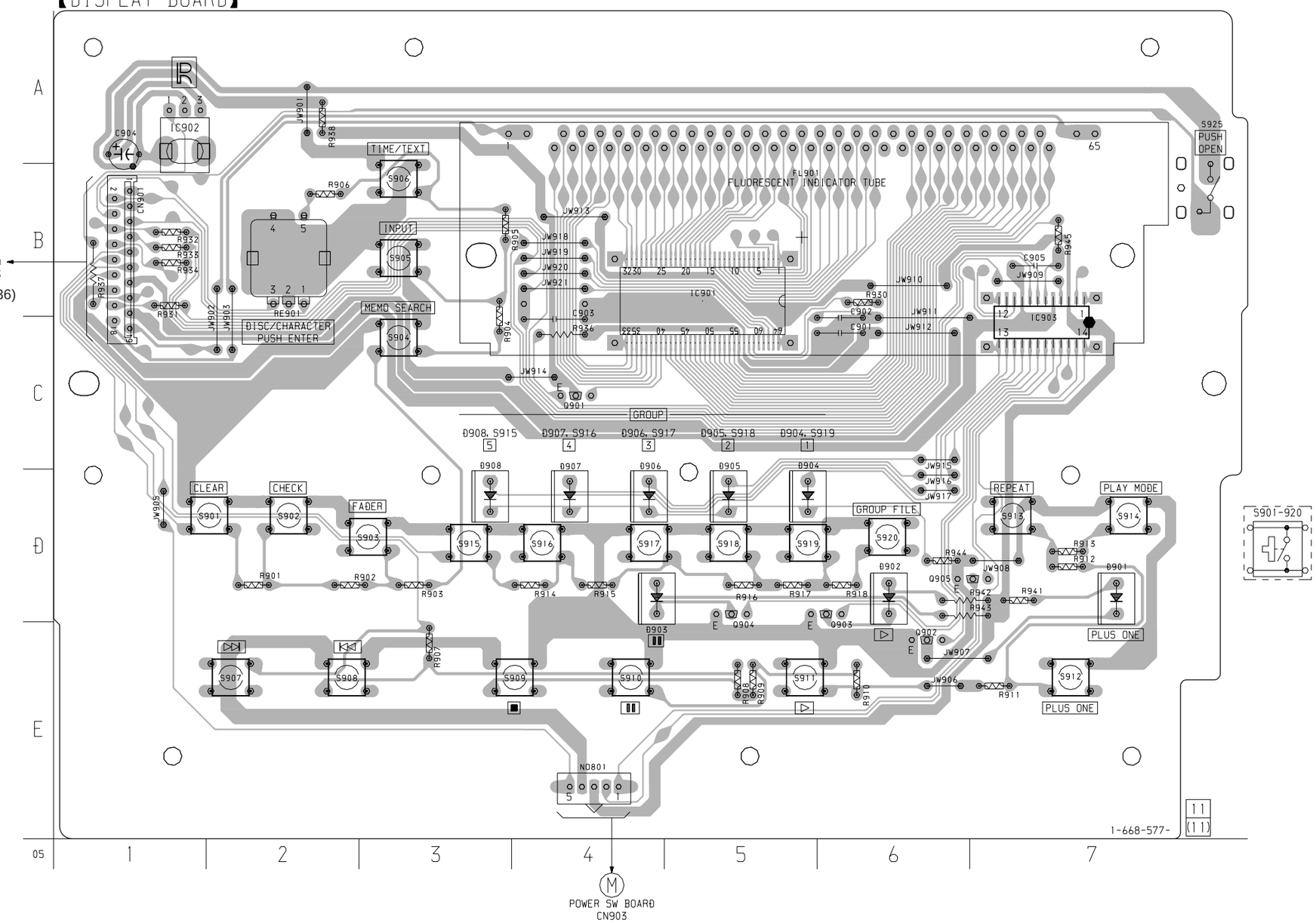
7-8. PRINTED WIRING BOARDS – PANEL Section –

• See page 20 for Circuit Boards Location. • See page 21 for Note.

【POWER SW BOARD】



【DISPLAY BOARD】

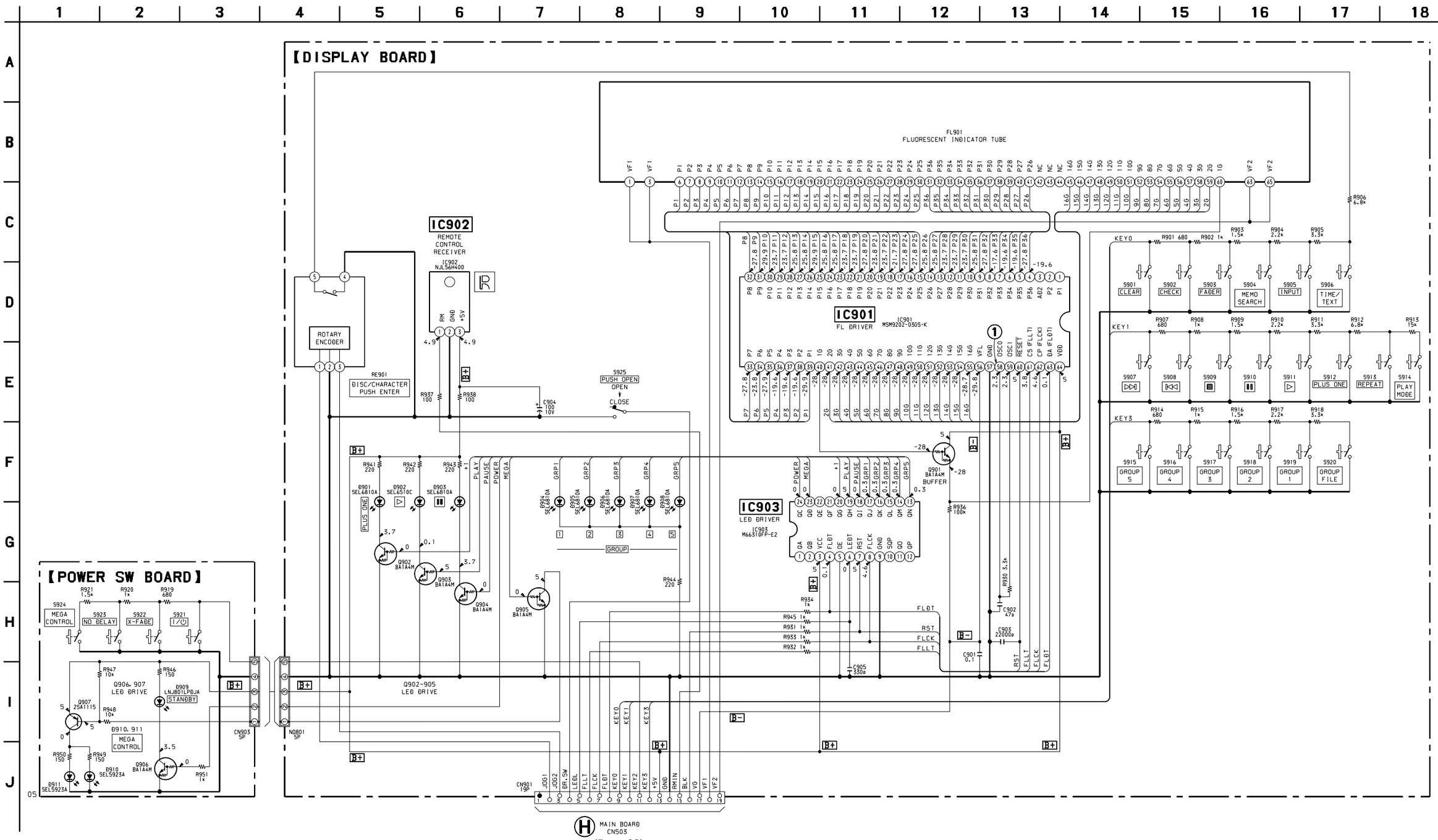


• **Semiconductor Location**
(DISPLAY Board)

Ref. No.	Location	Ref. No.	Location
D901	D-7	IC901	B-5
D902	D-6	IC902	A-1
D903	D-4	IC903	C-7
D904	D-5		
D905	D-5	Q901	C-4
D906	D-4	Q902	E-6
D907	D-4	Q903	D-6
D908	D-3	Q904	D-5
		Q905	D-6

7-9. SCHEMATIC DIAGRAM – PANEL Section –

• See page 22 for Waveform. • See page 48 for IC Block Diagram. • See page 21 for Note.

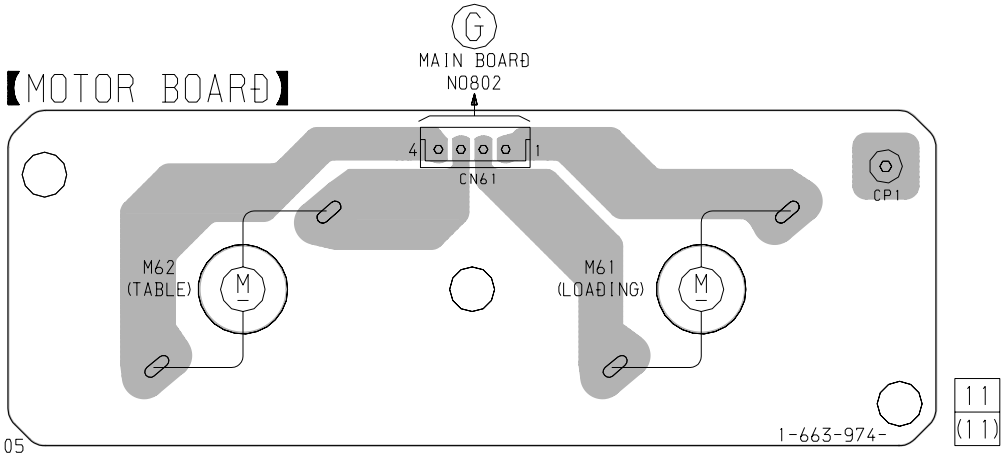


7-10. PRINTED WIRING BOARDS – SENSOR/MOTOR Section –

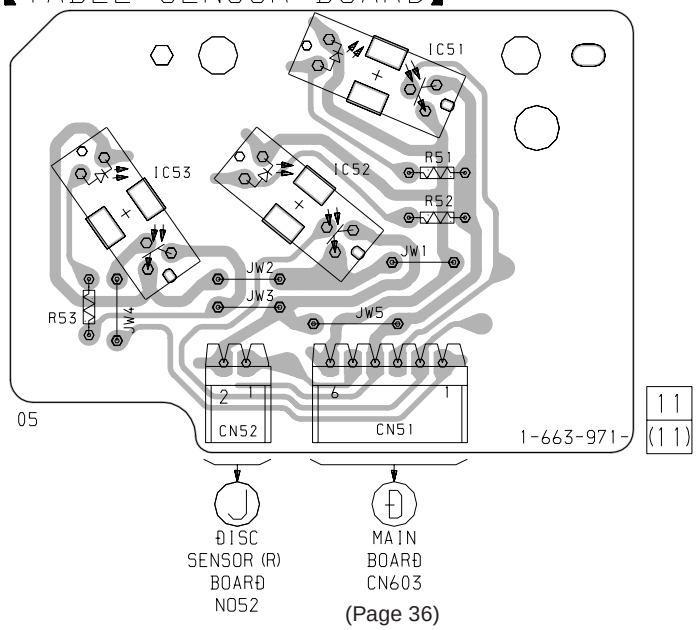
• See page 20 for Circuit Boards Location. • See page 21 for Note.

(Page 36)

【MOTOR BOARD】

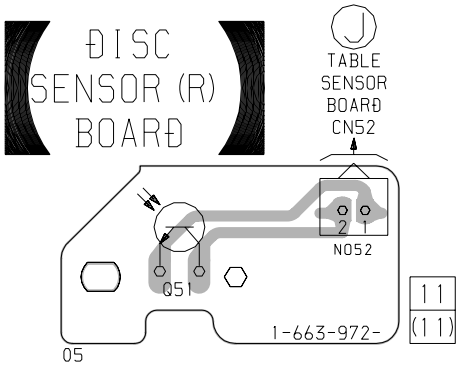


【TABLE SENSOR BOARD】

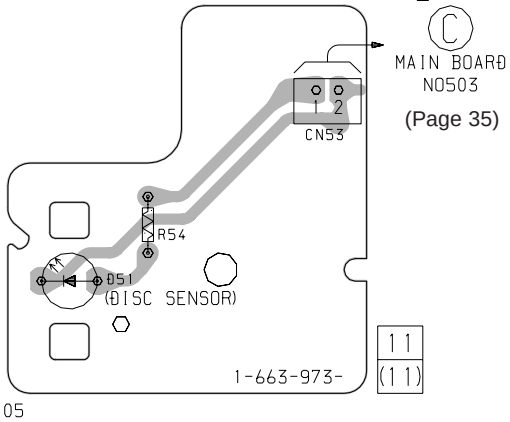


(Page 36)

【DISC SENSOR (R) BOARD】

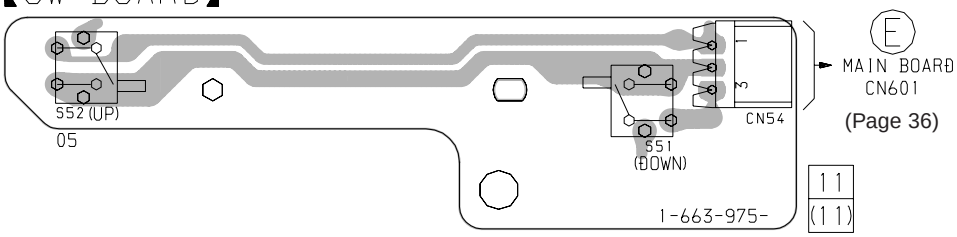


【DISC SENSOR (S) BOARD】

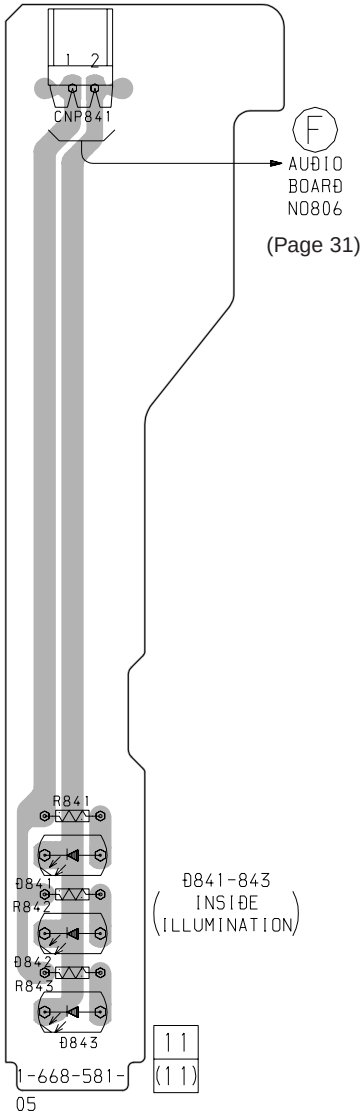


(Page 35)

【SW BOARD】

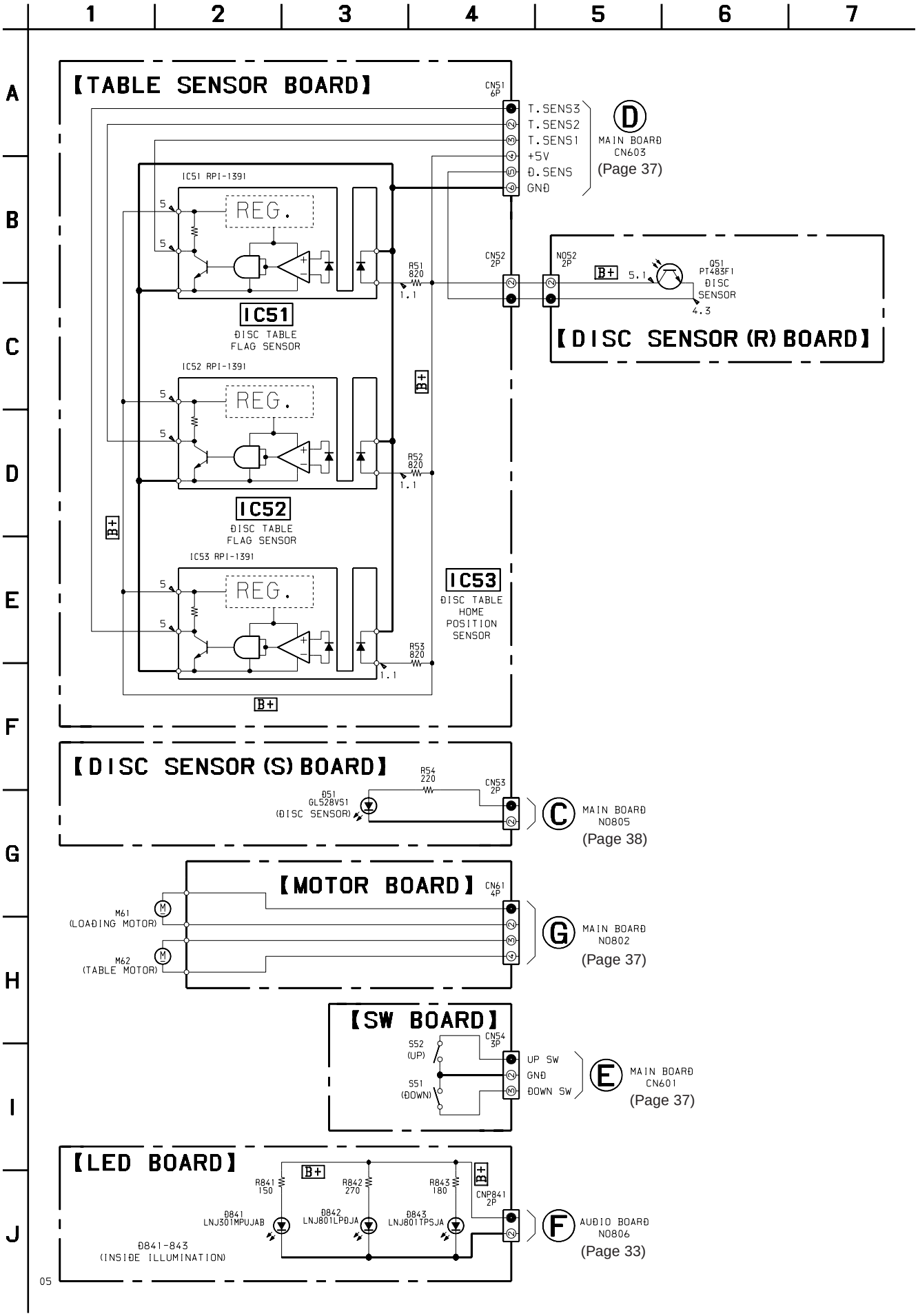


【LED BOARD】



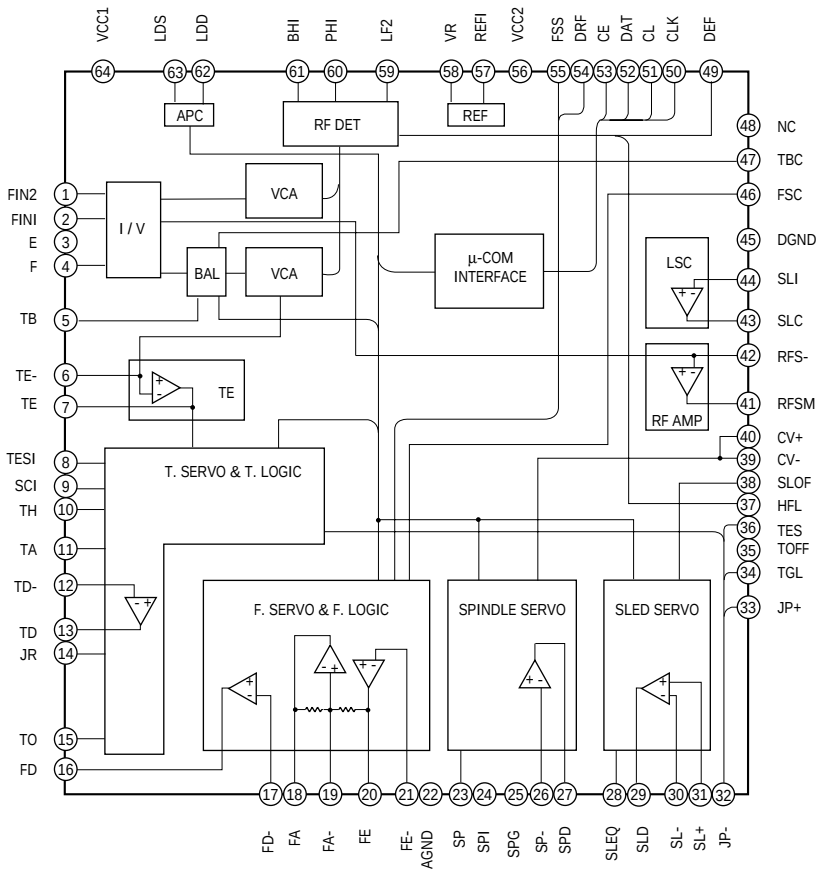
7-11. SCHEMATIC DIAGRAM – SENSOR/MOTOR Section –

• See page 21 for Note.

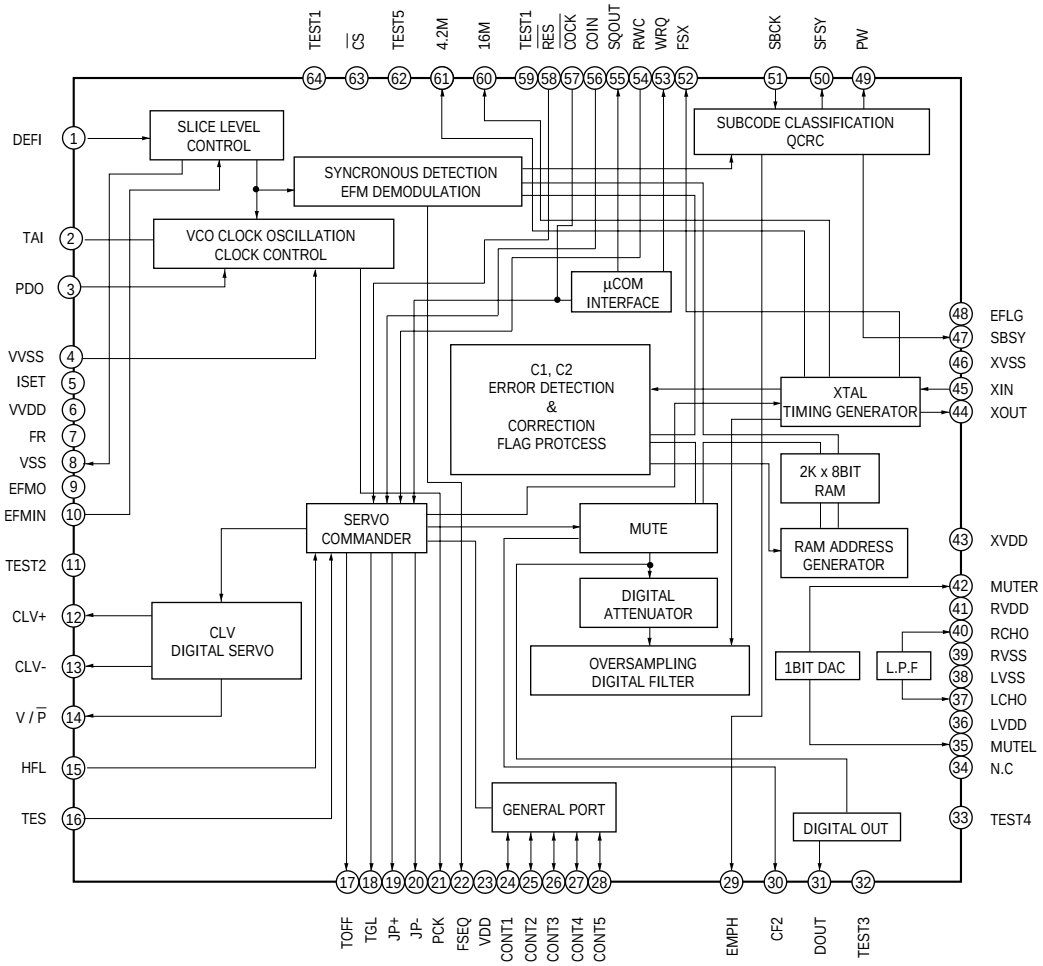


• IC Block Diagrams – BD Board –

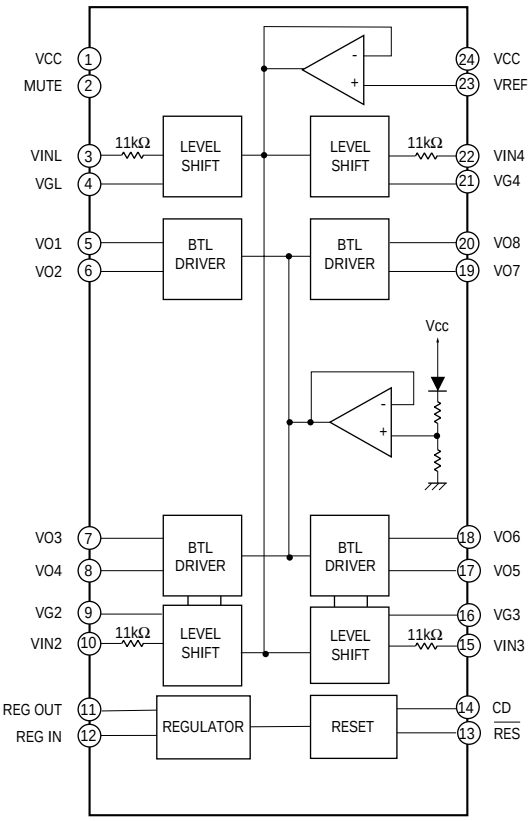
IC101 LA9241M



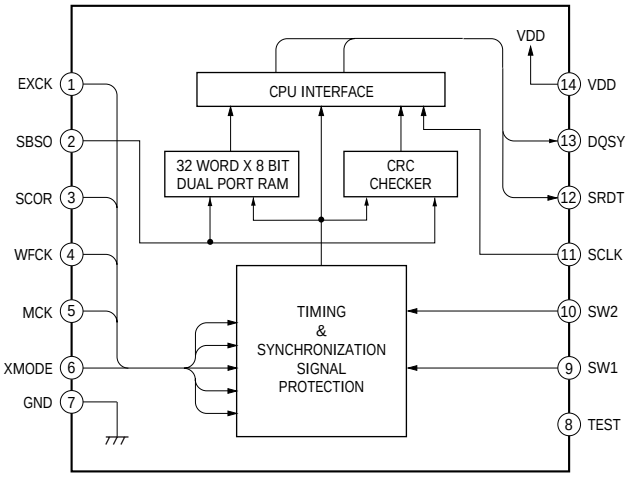
IC102 LC78622E



IC103 LA6541

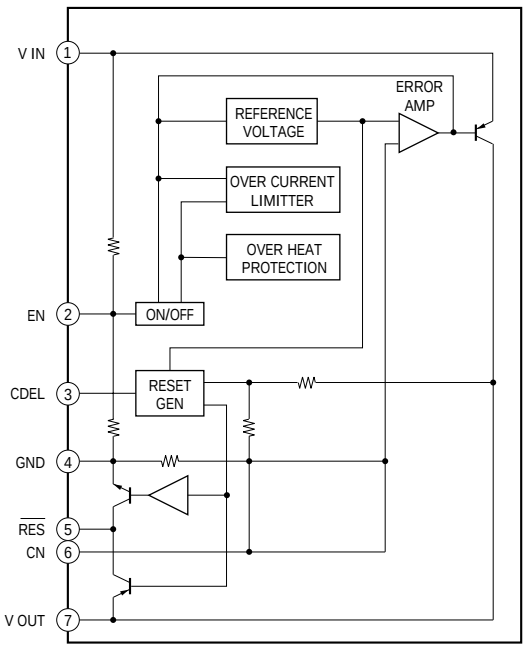


IC104 LC89170M

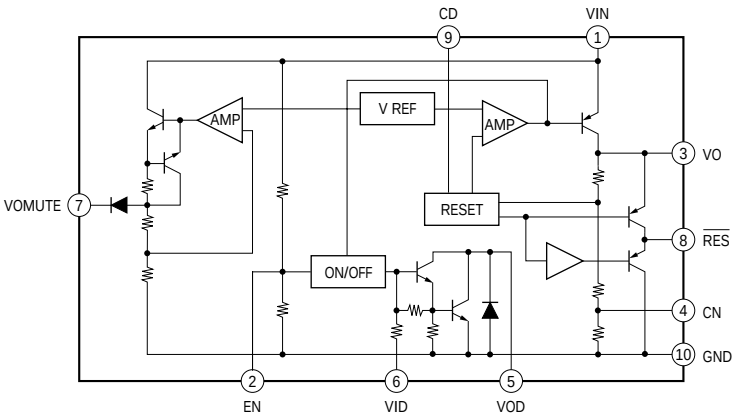


– MAIN Board –

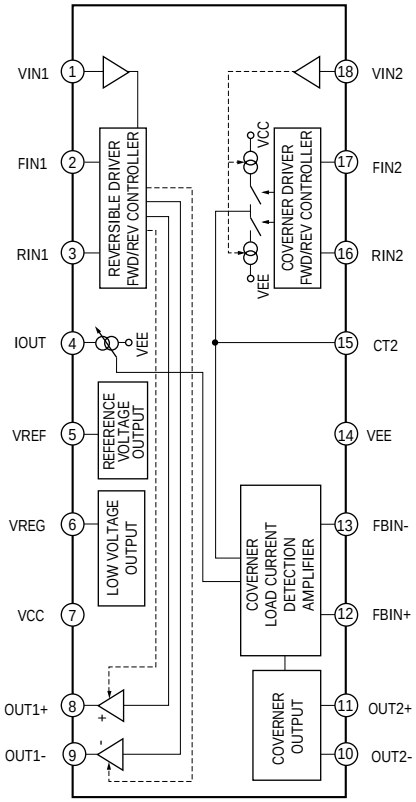
IC201 LA5602



IC203 LA5601

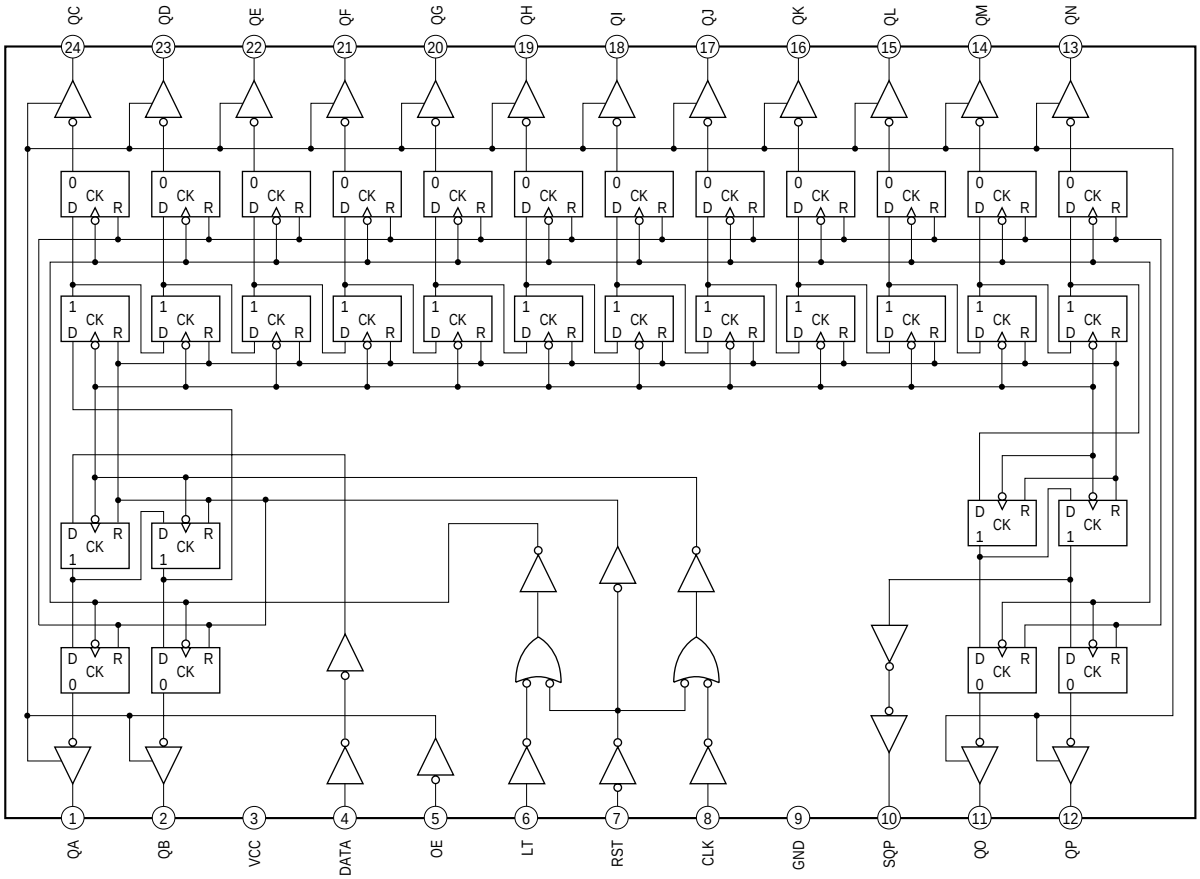


IC601 BA6780



– DISPLAY Board –

IC903 M66310FP



7-12. IC PIN FUNCTION DESCRIPTION

• BD BOARD IC101 LA9241M (RF AMPLIFIER, FOCUS/TRACKING/SLED SERVO)

Pin No.	Pin Name	I/O	Function
1	FIN2	I	Signal input (B+D) from the optical pick-up detector Added with FIN1 to create RF signal, subtracted with FIN1 to create focus error signal
2	FIN1	I	Signal input (A+C) from the optical pick-up detector
3	E	I	Signal input (E) from the optical pick-up detector Subtracted with F to create tracking error signal
4	F	I	Signal input (F) from the optical pick-up detector
5	TB	I	Tracking error signal input for the tracking balance adjustment
6	TE–	I	Tracking error signal (invert signal) input terminal
7	TE	O	Tracking error signal output terminal
8	TESI	I	TES (Track Error Sense) comparator input terminal Tracking error signal is band-passed and input
9	SCI	I	Shock detection input terminal
10	TH	I	Time constant setting terminal for the tracking gain adjustment
11	TA	O	TA amplifier output terminal
12	TD–	I	Creates a tracking phase compensation constant between TD (pin ⑬) and VR (pin ㊽) pins
13	TD	O	Setting terminal for the tracking phase compensation
14	JP	I	Setting terminal for the tracking jump signal (kick pulse) amplitude
15	TO	O	Tracking coil (2-axis device) drive signal output to the LA6541 (IC103), and sled motor drive signal output terminal
16	FD	O	Focus coil (2-axis device) drive signal output to the LA6541 (IC103)
17	FD–	I	Creates a focusing phase compensation constant between FD (pin ⑯) and FA (pin ⑱) pins
18	FA	O	Creates a focusing phase compensation constant between FD– (pin ⑰) and FA– (pin ⑲) pins
19	FA–	I	Creates a focusing phase compensation constant between FA (pin ⑱) and FE (pin ⑳) pins
20	FE	O	Focus error signal output terminal
21	FE–	I	Focus error signal (invert signal) input terminal
22	AGND	—	Ground terminal (analog system)
23	SP	O	Single end output of the CV+ (pin ㊵) and CV– (pin ㊴) pins signal
24	SPI	I	Spindle amplifier input terminal (invert input)
25	SPG	I	Gain setting resistor is connected when the spindle 12 cm mode
26	SP–	I	Works together with the SPD (pin ㉗) to connect to the spindle phase compensation constant
27	SPD	O	Spindle motor (M101) drive signal output to the LA6541 (IC103)
28	SLEQ	I	Sled phase compensation constant is connected
29	SLD	O	Sled motor (M102) drive signal output to the LA6541 (IC103)
30	SL–	I	Sled feeding signal input from the system controller (IC501)
31	SL+	I	Sled feeding signal input from the system controller (IC501)
32	JP–	I	Tracking jump control signal input from the DSP (IC102)
33	JP+	I	Tracking jump control signal input from the DSP (IC102)
34	TGL	I	Tracking gain control signal input from the DSP (IC102) Gain becomes low when TGL is “H”
35	TOFF	I	Tracking off control signal input from the DSP (IC102) Tracking becomes off when TOFF is “H”
36	TES	O	Tracking error signal output to the DSP (IC102)
37	HFL	O	Tracking detection signal output to the DSP (IC102) HFL (High Frequency Level) is used to determine whether the main beam is positioned on a pit or a mirror
38	SLOF	I	Sled servo off control signal input from the DSP (IC102) Rough servo/phase control automatic switching monitor input “H”: rough servo, “L”: phase servo
39	CV–	I	CLV error signal input from the DSP (IC102)

Pin No.	Pin Name	I/O	Function
40	CV+	I	CLV error signal input from the DSP (IC102)
41	RFSM	O	Playback EFM RF signal output to the DSP (IC102)
42	RFS–	I	Works together with the RFSM (pin ㊶) to set the RF gain and the 3T compensation constant for the EFM RF signal
43	SLC	O	SLI (Slice Level Control) is output to control a data slice level of the RF waveform by the DSP (IC102)
44	SLI	I	Input terminal for controlling a data slice level by the DSP (IC102)
45	DGND	—	Ground terminal (digital system)
46	FSC	O	Focus search smoothing capacitor output terminal
47	TBC	I	TBC (Tracking Balance Control) sets a EF balance variable range
48	NC	—	Not used (open)
49	DEF	O	Defect detection signal output to the DSP (IC102)
50	CLK	I	Reference clock (4.2336 MHz) input from the DSP (IC102)
51	CL	I	Command serial clock signal input from the system controller (IC501)
52	DAT	I	Command serial data input from the system controller (IC501)
53	CE	I	Command chip enable signal input from the system controller (IC501)
54	DRF	O	Focus OK signal output to the system controller (IC501) “L”: NG, “H”: OK
55	FSS	I	FSS (Focus Search Select) is a switching terminal for the focus search mode (±search/+search for a reference voltage) Not used (open)
56	VCC2	—	Power supply terminal (+5V) (servo system and digital system)
57	REFI	I	Connected to the coupling capacitor for the reference voltage (+2.5V)
58	VR	O	Reference voltage (+2.5V) output terminal
59	LF2	I	Constant setting for a disc defect detection
60	PH1	I	Connected to the capacitor for the RF signal peak hold
61	BH1	I	Connected to the capacitor for the RF signal bottom hold
62	LDD	O	Laser drive signal output to the automatic power control circuit
63	LDS	I	Light amount monitor input of the laser diode (PD)
64	VCC1	—	Power supply terminal (+5V) (RF system)

• BD BOARD IC102 LC78622E (DIGITAL SIGNAL PROCESSOR, DIGITAL FILTER, D/A CONVERTER)

Pin No.	Pin Name	I/O	Function
1	DEFI	I	Defect detection signal input from the RF amplifier (IC101)
2	TAI	I	PLL test input terminal Not used (fixed at "L")
3	PDO	O	PLL phase comparison output for external VCO control
4	VVSS	—	Ground terminal (internal VCO system)
5	ISET	I	Connected to a current adjusting resistor for the PDO output
6	VVDD	—	Power supply terminal (+5V) (internal VCO system)
7	FR	I	Adjusts the VCO frequency range
8	VSS	—	Ground terminal (digital system)
9	EFMO	O	Slice level control to EFM signal output
10	EFMIN	I	Playback EFM RF signal input from the RF amplifier (IC101)
11	TEST2	I	Test input terminal (fixed at "L" in this set)
12	CLV+	O	Disc motor control signal output to the RF amplifier (IC101) (3-value output available depending on the command)
13	CLV–	O	
14	V/P	O	Sled servo on/off control signal output to the RF amplifier (IC101) Rough servo/phase control automatic switching monitor output "H": rough servo, "L": phase servo
15	HFL	I	Tracking detection signal input from the RF amplifier (IC101) (Schmitt input) HFL (High Frequency Level) is used to determine whether the main beam is positioned on a pit or mirror
16	TES	I	Tracking error signal input from the RF amplifier (IC101) (schmitt input)
17	TOFF	O	Tracking off control signal output to the RF amplifier (IC101) Tracking becomes off when TOFF is "H"
18	TGL	O	Tracking gain control signal output to the RF amplifier (IC101) (Raises gain when "L")
19	JP+	O	Track jump control signal output to the RF amplifier (IC101) (3-value output available depending on the command)
20	JP–	O	
21	PCK	O	EFM data playback clock monitor output terminal (4.3218 MHz when phase is locked)
22	FSEQ	O	Sync signal detection output terminal ("H" when a sync signal detected from the EFM signal and that generated internally coincide)
23	VDD	—	Power supply terminal (+5V) (digital system)
24	CONT1	I	Guard frame sync input terminal
25	CONT2	I	Sled servo on/off control signal input terminal
26	CONT3	O	Sled servo drive control signal output terminal
27	CONT4	I	Sled limit-in detect switch (S101) input terminal The optical pick-up is inner position when "L"
28	CONT5	O	Not used (open)
29	EMPH	O	De-emphasis control signal output terminal The de-emphasis disc is being played back when "H" Not used (open)
30	C2F	O	C2PO (error condition monitor) signal output terminal
31	DOUT	O	Digital signal output terminal (EIAJ format)
32	TEST3	I	Test input terminal (fixed at "L" in this set)
33	TEST4	I	Test input terminal (fixed at "L" in this set)
34	NC	—	Not used (open)
35	MUTEL	O	Line muting on/off control signal output terminal (for L-ch side) "H": muting on
36	LVDD	—	Power supply terminal (+5V) (L-ch D/A converter system)
37	LCHO	O	Analog audio signal output from the internal D/A converter block (for L-ch side)
38	LVSS	—	Ground terminal (L-ch D/A converter system)
39	RVSS	—	Ground terminal (R-ch D/A converter system)
40	RCHO	O	Analog audio signal output from the internal D/A converter block (for R-ch side)
41	RVDD	—	Power supply terminal (+5V) (R-ch D/A converter system)

Pin No.	Pin Name	I/O	Function
42	MUTER	O	Line muting on/off control signal output terminal (for R-ch side) "H": muting on
43	XVDD	—	Power supply terminal (+5V) (crystal oscillator system)
44	XOUT	O	System clock output terminal (16.9344 MHz)
45	XIN	I	System clock input terminal (16.9344 MHz)
46	XVSS	—	Ground terminal (crystal oscillator system)
47	SBSY	O	C1, C2, single correction, and double correction monitor output to the CD text decoder (IC104)
48	EFLG	O	Subcode P to W output terminal
49	PW	O	Subcode frame sync signal output to the CD text decoder (IC104)
50	SFSY	O	Write frame clock signal output to the CD text decoder (IC104)
51	SBCK	I	Subcode reading clock signal input from the CD text decoder (IC104) (schmitt input)
52	FSX	O	7.35 kHz sync signal output divided from the crystal oscillation
53	WRQ	O	Subcode Q synchronizing signal output to the system controller (IC501)
54	RWC	I	Command chip enable signal input from the system controller (IC501) (schmitt input)
55	SQOUT	O	Subcode Q data output to the system controller (IC501)
56	COIN	I	Command serial data input from the system controller (IC501)
57	CQCK	I	Command serial clock signal input from the system controller (IC501) (schmitt input) Fetching clock input or subcode extracting clock input from SQOUT (pin %∞)
58	RES	I	System reset signal input from the reset signal generator (IC201) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
59	TEST11	O	Test output terminal Not used (open)
60	16M	O	Master clock signal (16.9344 MHz) output to the CD text decoder (IC104)
61	4.2M	O	Reference clock signal (4.2336 MHz) output to the RF amplifier (IC102)
62	TEST5	I	Test input terminal (fixed at "L" in this set)
63	CS	I	Chip select signal input terminal Not used (fixed at "L")
64	TEST1	I	Test input terminal (fixed at "L" in this set)

• MAIN BOARD IC501 CXP84340-071Q (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Function
1 to 5	A3 to A7	O	Address signal output to the static RAM (IC502)
6	A12	O	
7	A14	O	
8 to 11	A11 to A8	O	
12	A13	O	
13	$\overline{WE}$	O	Data write enable signal output to the static RAM (IC502) "L" active
14	LDIN	O	Loading motor drive signal (load-in direction) output to the BA6780 (IC601) "H" active
15	LDOUT	O	Loading motor drive signal (load-out direction) output to the BA6780 (IC601) "H" active
16	TBLL	O	Table motor drive signal (counterclockwise) output to the BA6780 (IC601) "H" active
17	TBLR	O	Table motor drive signal (clockwise) output to the BA6780 (IC601) "H" active
18, 19	NC	O	Not used (open)
20	HHOUT	O	AND output of T.SENS1 (pin ⑫) and T.SENS2 (pin ⑬) when the test mode
21	LEDL	O	Serial data latch pulse output to the LED driver (IC903) "H" active
22	FLLT	O	Serial data latch pulse output to the FL driver (IC901) "L" active
23	JOG1	I	Jog dial pulse input from the rotary encoder (RE901)
24	JOG2	I	Jog dial pulse input from the rotary encoder (RE901)
25	DOORSW	I	Door open/close detect switch (S925) input "L": close, "H": open
26	FLCK	O	Serial data transfer clock signal output to the FL driver (IC901) "L" active
27	FLDT	O	Serial data output to the FL driver (IC901)
28	ZMUTE	O	Muting on/off control signal output for the 2nd CD IN "H" active
29	ICSW	O	Enable signal output to the LA5602 (IC201) Used for the BD section reset "H" active
30	$\overline{RESET}$	I	System reset signal input from the reset signal generator (IC203) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
31	EXTAL	I	Main system clock input terminal (10 MHz)
32	XTAL	O	Main system clock output terminal (10 MHz)
33	VSS	—	Ground terminal
34	TX	O	Sub system clock output terminal Not used (open)
35	TEX	I	Sub system clock input terminal Not used (fixed at "L")
36	AVSS	—	Ground terminal (for A/D converter)
37	AVREF	I	Reference voltage (+5V) input terminal (for A/D converter)
38	KEY0	I	Key input terminal (A/D input) CLEAR, CHECK, FADER, MEMO SEARCH, INPUT, TIME/TEXT keys input (S901 to 906)
39	KEY1	I	Key input terminal (A/D input) ▷▷⏐, ⏐◁◁, ■, ❚❚, ▷, PLUS ONE, REPEAT, PLAY MODE keys input (S907 to 914)
40	KEY2	I	Key input terminal (A/D input) I/⏻, X-FADE, NO DELAY, MEGA CONTROL keys input (S921 to 924)
41	KEY3	I	Key input terminal (A/D input) GROUP 5 to 1, GROUP FILE keys input (S915 to 920)
42	D.SENS	I	Inputs the disc sensor (Q51) detection signal "H" active
43	CD1/2/3	I	COMMAND MODE switch (S701) input terminal "L": CD1, "H": CD3 (CD2: center voltage input)
44	TEST	I	Setting terminal for the test mode "L": ADJ mode, center voltage: AFADJ mode
45	BUSOUT	O	Sircs remote control signal output for the S-LINK CONTROL A1 "H" active
46	BUSIN	I	Sircs remote control signal input for the S-LINK CONTROL A1 "L" active
47	SL+	O	Sled feeding signal (external direction) output to the RF amplifier (IC101) "H" active
48	CQCK	O	Command serial clock signal output to the RF amplifier (IC101) and DSP (IC102) "L" active

Pin No.	Pin Name	I/O	Function
49	SQOUT	I	Subcode Q data input from the DSP (IC102)
50	COIN	O	Command serial data output to the RF amplifier (IC101) and DSP (IC102)
51	SCLK	O	Serial data transfer clock signal output to the CD text decoder (IC104) "L" active
52	SRDT	I	Serial data input from the CD text decoder (IC104)
53	NC	O	Not used (open)
54	DRF	I	Focus OK signal input from the RF amplifier (IC101) and DSP (IC102) "L": NG, "H": OK
55	WRQ	I	Subcode Q synchronizing signal input from the DSP (IC102) "H" active
56	RMIN	I	Remote control signal input from the remote control receiver (IC902) "L" active
57	TGL	I	Tracking gain control signal input from the DSP (IC102) Gain becomes low when tracking gain is "H"
58	RWC	O	Command latch output to the RF amplifier (IC101) and DSP (IC102) "L" active
59	SL–	O	Sled feeding signal (internal direction) output to the RF amplifier (IC101) "H" active
60	DQSY	I	Serial data synchronizing signal input from the CD text decoder (IC104) "L" active
61	XMODE	O	Reset signal output to the CD text decoder (IC104) "H": reset
62	T.SENS1	I	Disc table flag detect sensor (IC51) input terminal
63	T.SENS2	I	Disc table flag detect sensor (IC52) input terminal
64	T.SENS3	I	Disc table home position detect sensor (IC53) input terminal
65	DOWNSW	I	Inputs the loading out switch (S52) detection signal "L" active
66	UPSW	I	Inputs the loading in switch (S51) detection signal "L" active
67	SELECT	I	Not used (fixed at "H")
68 to 71	D3 to D6	I/O	Two-way data bus with the static RAM (IC502)
72	VDD	—	Power supply terminal (+5V)
73	NC (VDD)	—	Not used (connected to power supply (+5V) line)
74	D7	I/O	Two-way data bus with the static RAM (IC502)
75 to 77	D0 to D2	I/O	Two-way data bus with the static RAM (IC502)
78 to 80	A0 to A2	O	Address signal output to the static RAM (IC502)

SECTION 8
EXPLODED VIEWS

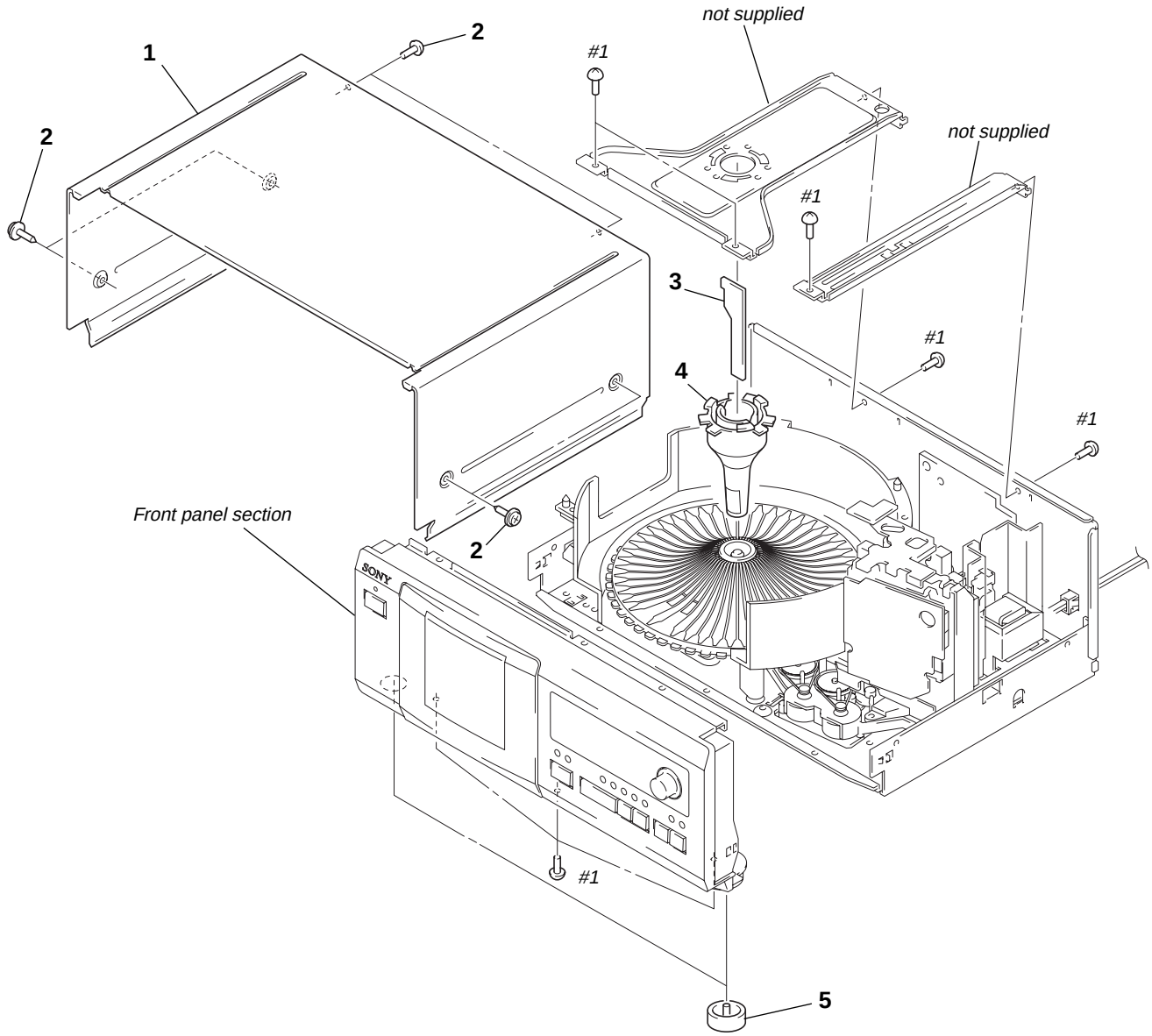
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Abbreviation
  AED : North Europe
  CND : Canadian
  SP : Singapore
  AUS : Australia
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

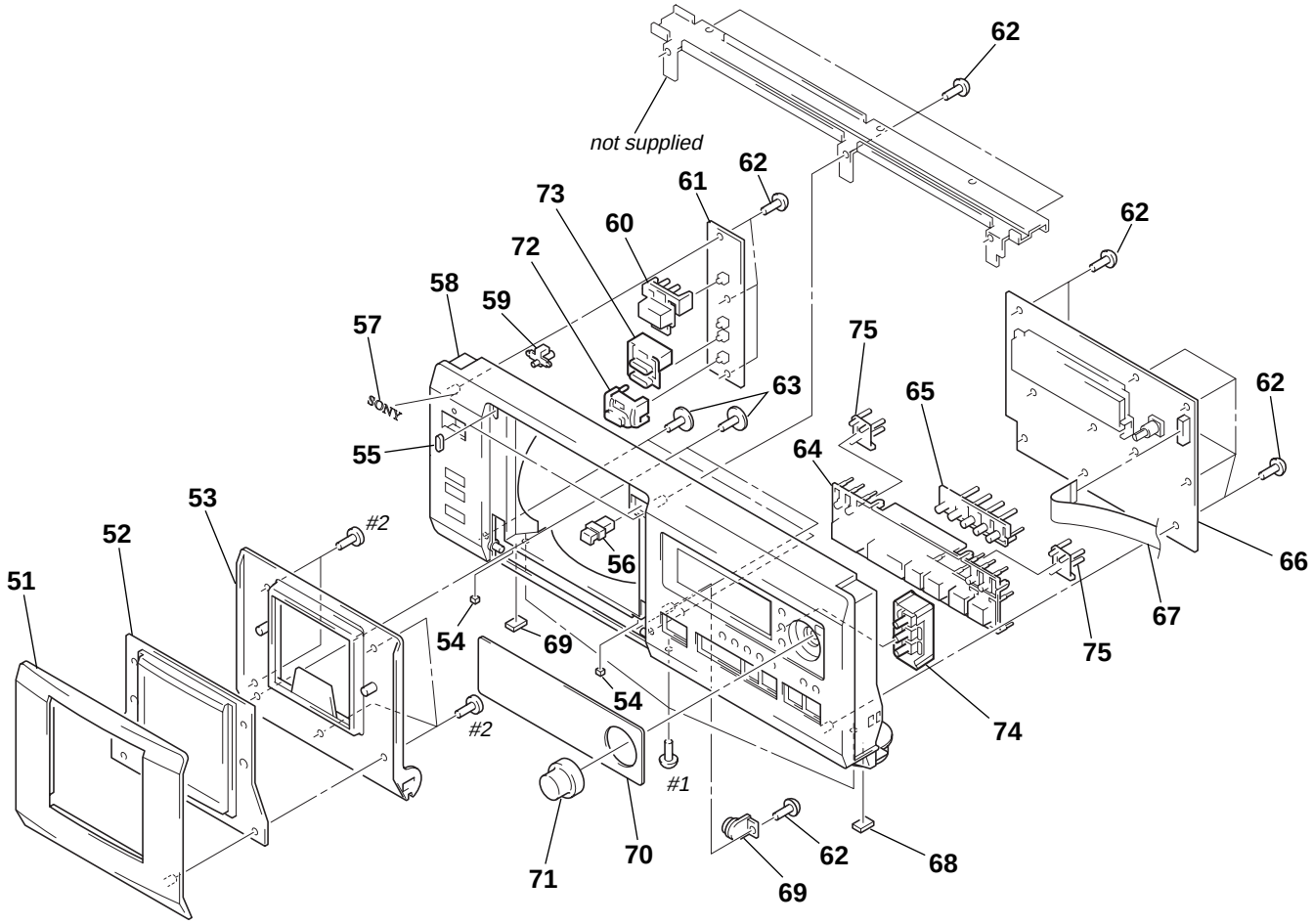
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

(1) CASE SECTION



Ref. No.	Part No.	Description	Remark
* 1	4-987-999-11	CASE	
2	3-704-366-01	SCREW (CASE) (M3X8)	
* 3	1-668-581-11	LED BOARD	
4	X-4948-515-1	ILLUMINATION ASSY	
5	4-977-593-01	RING (DIA. 50), ORNAMENTAL	

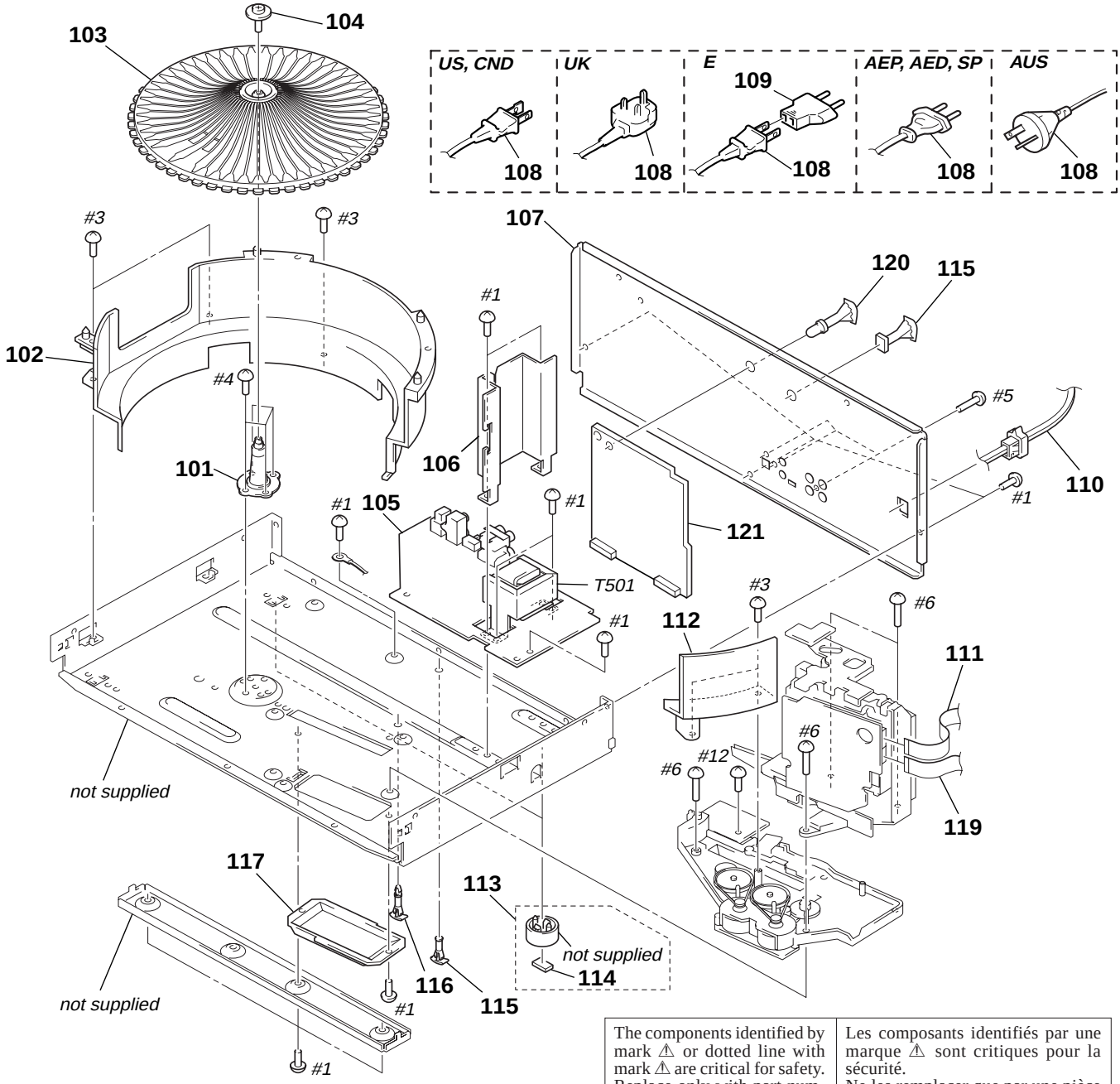
(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	4-997-019-01	LID (F)	
52	4-997-020-01	WINDOW (LID)	
53	4-997-018-01	LID (R)	
54	4-988-675-01	CUSHION (STOPPER)	
* 55	4-988-674-01	CUSHION (CLOSE)	
56	4-989-312-01	LATCH, NS	
57	3-008-600-01	EMBLEM (5-AR), SONY	
58	4-997-062-11	PANEL, FRONT	
59	4-991-156-01	INDICATOR (POWER)	
60	4-991-152-11	BUTTON (POWER)	
* 61	1-668-578-11	POWER SW BOARD	
62	4-951-620-01	SCREW (2.6X8), +BVTP	
63	4-933-134-61	SCREW (+PTPWH M2.6X6)	

Ref. No.	Part No.	Description	Remark
64	X-4949-357-1	BUTTON (MAIN) ASSY	
65	4-996-359-11	BUTTON (BLOCK)	
* 66	A-4724-009-A	DISPLAY BOARD, COMPLETE	
67	1-773-140-11	WIRE (FLAT TYPE) (19 CORE)	
* 68	4-978-398-21	CUSHION	
69	3-354-963-21	DAMPER	
70	4-987-955-22	WINDOW (FL)	
71	4-987-941-01	KNOB (JOG)	
72	4-987-778-01	BUTTON (MEGA-CON)	
73	4-991-153-01	BUTTON (2 GANG)	
74	4-991-154-01	BUTTON (3 GANG)	
75	4-996-360-01	BUTTON (GF)	

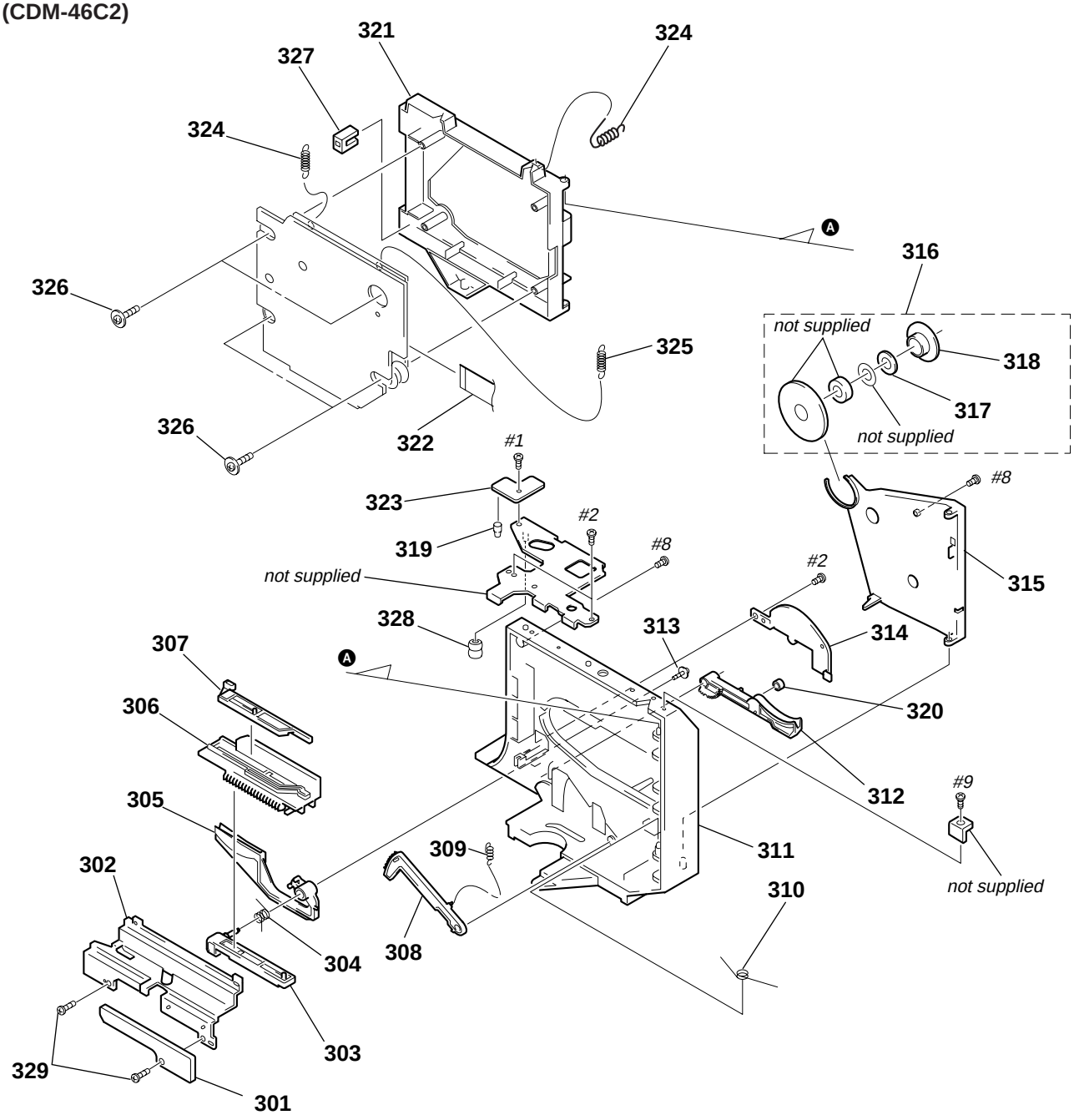
(3) CHASSIS SECTION



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
101	4-988-439-01	HOLDER, TABLE	
102	4-990-028-01	RING (A)	
103	4-988-434-01	TABLE (50)	
104	4-957-577-21	SCREW PTP WH (2.6X8) (DIA. 10)	
* 105	A-4724-008-A	AUDIO BOARD, COMPLETE (E)	
* 105	A-4724-011-A	AUDIO BOARD, COMPLETE (US, CND)	
* 105	A-4724-014-A	AUDIO BOARD, COMPLETE (AEP, UK, AED, SP, AUS)	
* 106	4-991-167-11	COVER, TRANSFORMER	
* 107	4-997-568-01	PANEL, BACK (US)	
* 107	4-997-568-11	PANEL, BACK (CND)	
* 107	4-997-568-21	PANEL, BACK (AEP, AED)	
* 107	4-997-568-31	PANEL, BACK (UK)	
* 107	4-997-568-41	PANEL, BACK (AUS)	
* 107	4-997-568-51	PANEL, BACK (E)	
* 107	4-997-568-61	PANEL, BACK (SP)	
⚠108	1-558-943-41	CORD, POWER (E)	
⚠108	1-575-651-21	CORD, POWER (AEP, AED, SP)	
⚠108	1-590-926-11	CORD, POWER (US, CND)	
⚠108	1-696-845-11	CORD, POWER (AUS)	
⚠108	1-751-529-11	CORD, POWER (UK)	
⚠109	1-569-007-11	ADAPTOR, CONVERSION 2P (E)	
110	3-703-571-11	BUSHING (S) (FBS002), CORD (E)	
110	4-966-267-11	BUSHING (FBS001), CORD (EXCEPT E)	
111	1-782-465-11	WIRE (FLAT TYPE) (16 CORE)	
112	4-990-029-01	RING (B)	
113	X-4946-543-2	FOOT (SMALL) ASSY	
* 114	4-978-398-21	CUSHION	
* 115	4-990-895-01	SUPPORT (P TYPE), LSR	
* 116	3-704-198-51	SUPPORT, PC	
* 117	4-988-534-01	COVER, MOTOR	
119	1-769-921-11	WIRE (FLAT TYPE) (9 CORE)	
120	3-704-198-61	SUPPORT, PC	
* 121	A-4724-007-A	MAIN BOARD, COMPLETE (E)	
* 121	A-4724-012-A	MAIN BOARD, COMPLETE (US, CND)	
* 121	A-4724-015-A	MAIN BOARD, COMPLETE (AEP, UK, AED, SP, AUS)	
⚠T501	1-431-333-11	TRANSFORMER, POWER (US, CND)	
⚠T501	1-431-334-11	TRANSFORMER, POWER (AEP, UK, AED, SP, AUS)	
⚠T501	1-431-335-11	TRANSFORMER, POWER (E)	

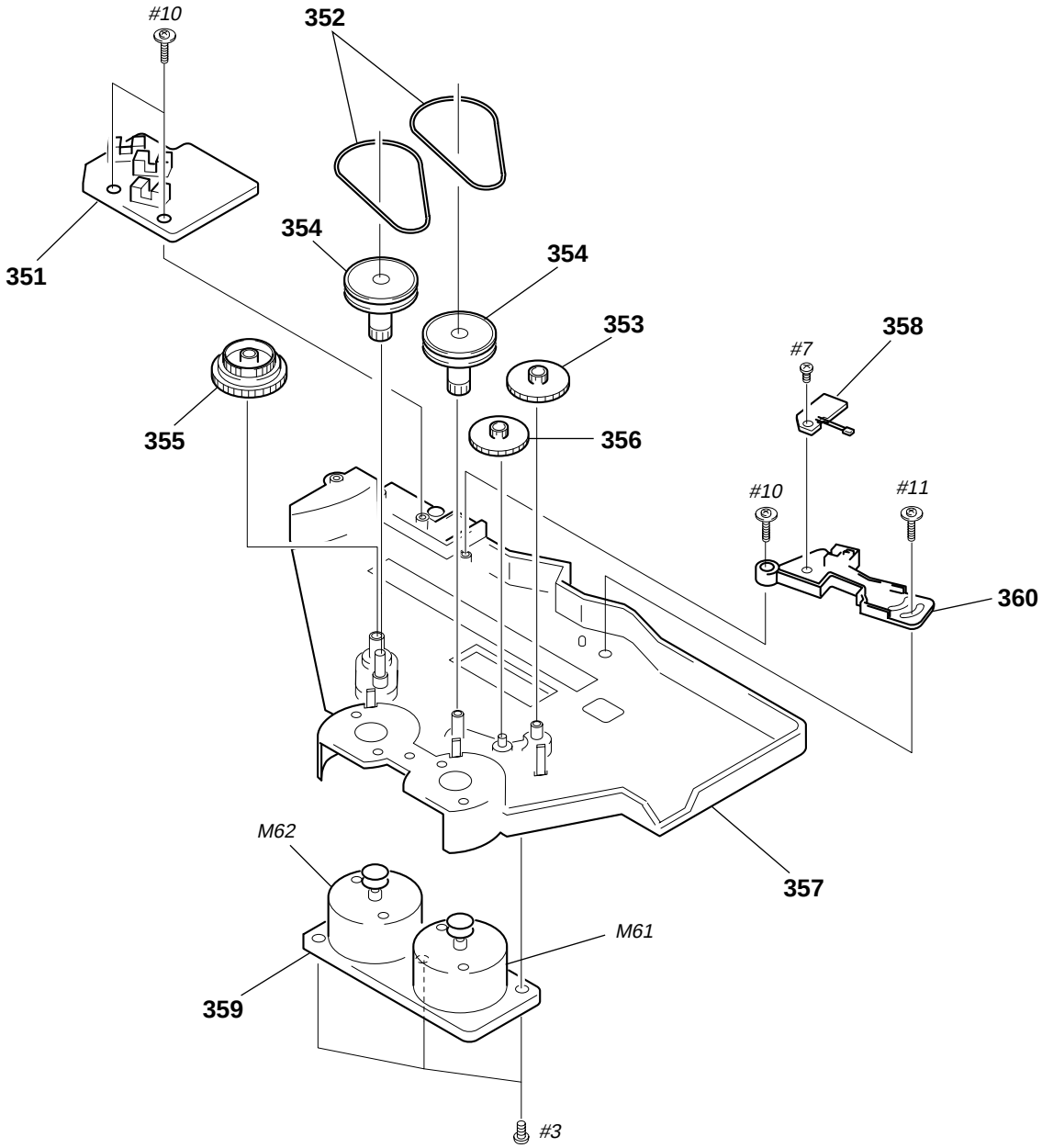
(4) MECHANISM DECK SECTION-1 (CDM-46C2)



Ref. No.	Part No.	Description	Remark
* 301	1-663-975-11	SW BOARD	
* 302	4-988-427-01	COVER, CAM	
303	4-988-420-01	SLIDER (LOADING)	
304	4-988-436-01	SPRING (LOADING), TORSION	
305	4-988-418-01	HOLDER (A), DISC	
* 306	4-988-417-01	SLIDER (CAM)	
307	4-988-433-01	SLIDER (LOCK)	
308	X-4948-020-1	LEVER (LOADING) ASSY	
309	4-988-438-01	SPRING (LEVER), TENSION	
310	4-988-437-01	SPRING (HOLDER), TORSION	
* 311	4-988-416-01	BASE, LOADING	
312	4-988-419-01	HOLDER (B), DISC	
313	4-992-069-01	SCREW (+PTPWH) (M2) (DIA. 7)	
* 314	4-988-454-01	COVER (LEVER)	
* 315	4-988-421-01	HOLDER (MAGNET)	

Ref. No.	Part No.	Description	Remark
316	A-4672-522-A	MAGNET ASSY	
317	4-960-633-11	YOKE (MAGNET)	
318	4-999-139-01	PULLEY (B)	
* 319	4-976-473-01	HOLDER (LED-S)	
320	4-988-431-01	ROLLER (DISC)	
321	X-4948-019-1	HOLDER ASSY, BU	
322	1-777-874-11	WIRE (FLAT TYPE) (16 CORE)	
* 323	1-663-973-11	DISC SENSOR (S) BOARD	
324	4-988-440-01	SPRING (F-1), TENSION	
325	4-988-441-01	SPRING (F-2), TENSION	
326	4-957-577-21	SCREW PTP WH (2.6X8) (DIA. 10)	
327	4-992-413-02	STOPPER	
328	3-910-095-11	RUBBER, VIBRATION PROOF	
329	4-951-620-01	SCREW (2.6X8), +BVTP	

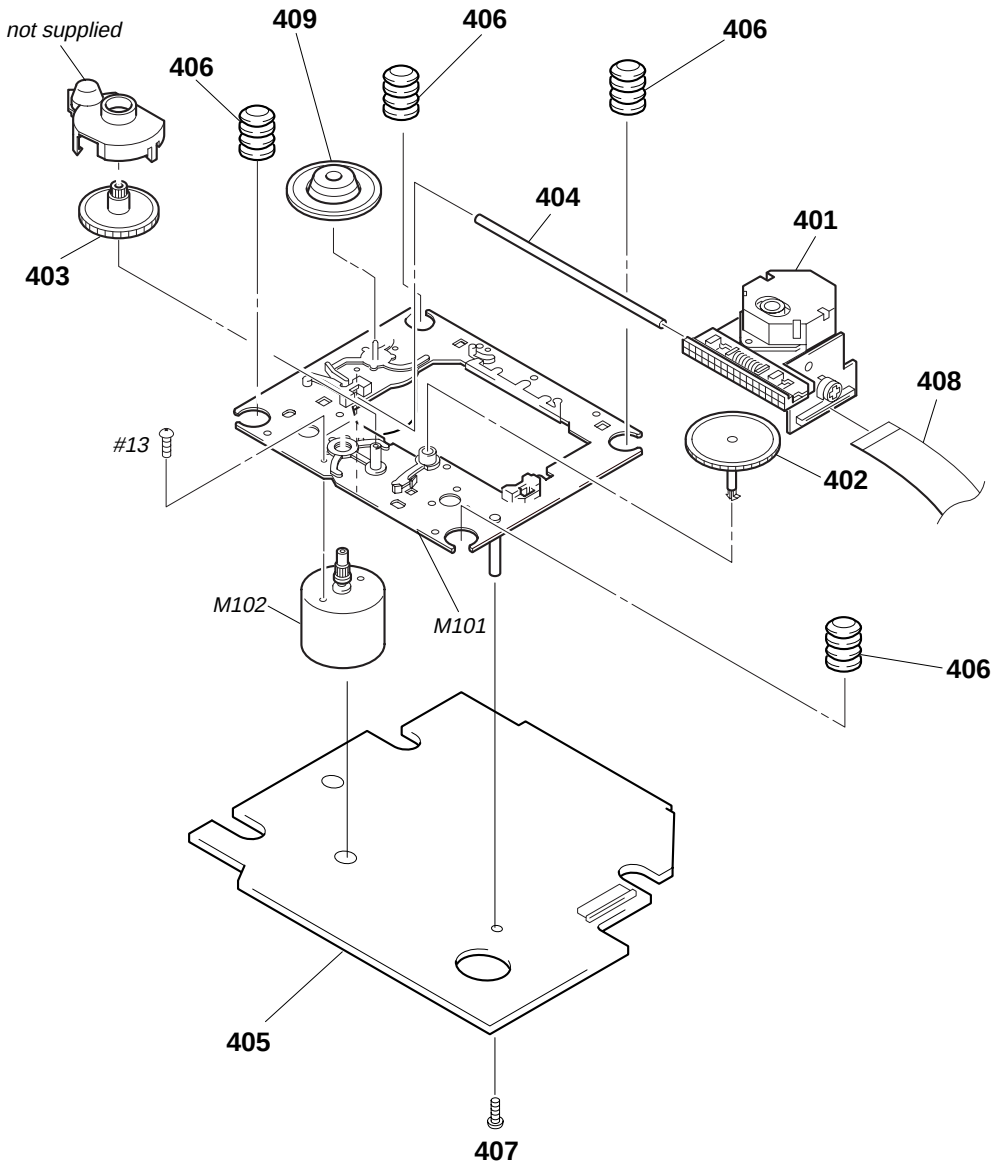
(5) MECHANISM DECK SECTION-2 (CDM-46C2)



Ref. No.	Part No.	Description	Remark
* 351	1-663-971-11	TABLE SENSOR BOARD	
352	4-988-414-01	BELT	
353	4-988-423-01	GEAR (A) (LOADING)	
354	4-988-425-01	PULLEY	
355	4-988-424-01	GEAR (TABLE)	
356	4-988-432-01	GEAR (B) (LOADING)	

Ref. No.	Part No.	Description	Remark
* 357	4-988-426-01	BASE (CDM)	
* 358	1-663-972-11	DISC SENSOR (R) BOARD	
* 359	1-663-974-11	MOTOR BOARD	
* 360	4-990-669-01	HOLDER (SENSOR)	
M61	X-4948-434-1	MOTOR ASSY (LOADING)	
M62	X-4948-434-1	MOTOR ASSY (TABLE)	

(6) OPTICAL PICK UP SECTION (KSS-213B/S-N)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
⚠401	8-848-379-31	OPTICAL PICK-UP KSS-213B/S-N	
402	2-626-907-01	GEAR (A) (S)	
403	2-627-003-02	GEAR (B) (RP)	
404	2-626-908-01	SHAFT, SLED	
* 405	A-4724-006-A	BD BOARD, COMPLETE	
* 406	4-992-054-01	RUBBER, VIBRATION PROOF	
407	4-996-243-01	SCREW (M2), +PSW	
408	1-777-874-11	WIRE (FLAT YTPE) (16 CORE)	
409	X-2646-108-2	TURN TABLE ASSY (AU) F	
M101	X-2646-110-2	T, T CHASSIS ASSY (MG) (F) (SPINDLE)	
M102	X-2625-769-1	MOTOR GEAR ASSY (MB) (RP) (SLED)	

SECTION 9
ELECTRICAL PARTS LIST

AUDIO

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- Abbreviation
  AED : North European
  CND : Canadian
  SP : Singapore
  AUS : Australian

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-4724-008-A	AUDIO BOARD, COMPLETE (E)			
*	A-4724-011-A	AUDIO BOARD, COMPLETE (US, CND)			
*	A-4724-014-A	AUDIO BOARD, COMPLETE (AEP, UK, AED, SP, AUS)			
		**********			
		< CAPACITOR >			
C203	1-161-494-00	CERAMIC	0.022uF		25V
C206	1-126-968-11	ELECT	100uF	20%	50V
C231	1-126-768-11	ELECT	2200uF	20%	16V
C232	1-126-768-11	ELECT	2200uF	20%	16V
C301	1-130-482-00	MYLAR	0.0082uF	5%	50V
C302	1-106-343-00	MYLAR	1000PF	5%	200V
C303	1-126-967-11	ELECT	47uF	20%	10V
C304	1-162-290-31	CERAMIC	470PF	10%	50V
C305	1-124-282-00	ELECT	22uF	20%	25V
C331	1-126-965-11	ELECT	22uF	20%	50V
C401	1-130-482-00	MYLAR	0.0082uF	5%	50V
C402	1-106-343-00	MYLAR	1000PF	5%	200V
C403	1-126-967-11	ELECT	47uF	20%	10V
C404	1-162-290-31	CERAMIC	470PF	10%	50V
C405	1-124-282-00	ELECT	22uF	20%	25V
C431	1-126-965-11	ELECT	22uF	20%	50V
C701	1-104-665-11	ELECT	100uF	20%	10V
C702	1-161-494-00	CERAMIC	0.022uF		25V
C704	1-162-282-31	CERAMIC	100PF	10%	50V
C708	1-161-494-00	CERAMIC	0.022uF		25V
		< CONNECTOR >			
CN201	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P			
* CN701	1-766-955-11	CONNECTOR, BOARD TO BOARD 11P			
CN703	1-778-981-11	CONNECTOR, BOARD TO BOARD 13P			
		< GROUND TERMINAL BOARD >			
CP2	1-537-771-21	TERMINAL BOARD, GROUND			
		< DIODE >			
D201	8-719-200-82	DIODE 11ES2			
D202	8-719-200-82	DIODE 11ES2			
D203	8-719-200-82	DIODE 11ES2			
D204	8-719-200-82	DIODE 11ES2			
D205	8-719-200-82	DIODE 11ES2			
D701	8-719-991-33	DIODE 1SS133T-77			
		< IC >			
IC301	8-759-145-58	IC UPC4558C			
IC302	8-759-145-58	IC UPC4558C			
IC401	8-759-145-58	IC UPC4558C			
IC402	8-759-145-58	IC UPC4558C			
IC701	8-749-921-12	IC GP1F32T (DIGITAL OUT OPTICAL)			
		< JACK >			
J301	1-770-720-11	JACK, PIN 4P (2ND CD IN, LINE OUT)			
J701	1-774-726-11	JACK (S-LINK CONTROL A1)			
		< LINE FILTER >			
⚠L201	1-424-485-11	FILTER, LINE			
		< TRANSISTOR >			
Q301	8-729-141-26	TRANSISTOR 2SC3622A-LK			
Q302	8-729-141-26	TRANSISTOR 2SC3622A-LK			
Q303	8-729-141-26	TRANSISTOR 2SC3622A-LK			
Q331	8-729-141-26	TRANSISTOR 2SC3622A-LK			
Q401	8-729-141-26	TRANSISTOR 2SC3622A-LK			
Q402	8-729-141-26	TRANSISTOR 2SC3622A-LK			
Q403	8-729-141-26	TRANSISTOR 2SC3622A-LK			
Q431	8-729-141-26	TRANSISTOR 2SC3622A-LK			
Q701	8-729-620-05	TRANSISTOR 2SC2603-EF			
		< RESISTOR >			
R301	1-249-417-11	CARBON	1K	5%	1/4W
R302	1-249-429-11	CARBON	10K	5%	1/4W
R303	1-249-432-11	CARBON	18K	5%	1/4W
R304	1-247-836-11	CARBON	1.6K	5%	1/4W
R305	1-247-836-11	CARBON	1.6K	5%	1/4W
R306	1-249-428-11	CARBON	8.2K	5%	1/4W
R307	1-247-826-00	CARBON	620	5%	1/4W
R308	1-249-429-11	CARBON	10K	5%	1/4W
R309	1-249-429-11	CARBON	10K	5%	1/4W
R310	1-249-429-11	CARBON	10K	5%	1/4W
R311	1-247-887-00	CARBON	220K	5%	1/4W
R312	1-247-826-00	CARBON	620	5%	1/4W
R313	1-249-409-11	CARBON	220	5%	1/4W
R314	1-249-421-11	CARBON	2.2K	5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

AUDIO BD

Ref. No.	Part No.	Description			Remark
R316	1-249-428-11	CARBON	8.2K	5%	1/4W
R318	1-247-895-00	CARBON	470K	5%	1/4W
R319	1-249-421-11	CARBON	2.2K	5%	1/4W
R321	1-249-421-11	CARBON	2.2K	5%	1/4W
R331	1-249-420-11	CARBON	1.8K	5%	1/4W
R332	1-249-421-11	CARBON	2.2K	5%	1/4W
R335	1-247-895-00	CARBON	470K	5%	1/4W
R401	1-249-417-11	CARBON	1K	5%	1/4W
R402	1-249-429-11	CARBON	10K	5%	1/4W
R403	1-249-432-11	CARBON	18K	5%	1/4W
R404	1-247-836-11	CARBON	1.6K	5%	1/4W
R405	1-247-836-11	CARBON	1.6K	5%	1/4W
R406	1-249-428-11	CARBON	8.2K	5%	1/4W
R407	1-247-826-00	CARBON	620	5%	1/4W
R408	1-249-429-11	CARBON	10K	5%	1/4W
R409	1-249-429-11	CARBON	10K	5%	1/4W
R410	1-249-429-11	CARBON	10K	5%	1/4W
R411	1-247-887-00	CARBON	220K	5%	1/4W
R412	1-247-826-00	CARBON	620	5%	1/4W
R413	1-249-409-11	CARBON	220	5%	1/4W
R414	1-249-421-11	CARBON	2.2K	5%	1/4W
R416	1-249-428-11	CARBON	8.2K	5%	1/4W
R418	1-247-895-00	CARBON	470K	5%	1/4W
R419	1-249-421-11	CARBON	2.2K	5%	1/4W
R421	1-249-421-11	CARBON	2.2K	5%	1/4W
R431	1-249-420-11	CARBON	1.8K	5%	1/4W
R432	1-249-421-11	CARBON	2.2K	5%	1/4W
R435	1-247-895-00	CARBON	470K	5%	1/4W
R701	1-249-429-11	CARBON	10K	5%	1/4W
R702	1-249-425-11	CARBON	4.7K	5%	1/4W
R703	1-249-429-11	CARBON	10K	5%	1/4W
R704	1-249-393-11	CARBON	10	5%	1/4W
		< SWITCH >			
⚠S201	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (VOLTAGE SELECTOR) (E)			
S701	1-571-308-11	SWITCH, SLIDE (COMMAND MODE)			
		< TRANSFORMER >			
⚠T501	1-431-333-11	TRANSFORMER, POWER (US, CND)			
⚠T501	1-431-334-11	TRANSFORMER, POWER (AEP, AED, UK, SP, AUS)			
⚠T501	1-431-335-11	TRANSFORMER, POWER (E)			
**********					
*	A-4724-006-A	BD BOARD, COMPLETE **********			
		< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C102	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C103	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C104	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C105	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C106	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C107	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C108	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C109	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V

Ref. No.	Part No.	Description			Remark
C110	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C111	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C112	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C113	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C114	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C115	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C116	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C117	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C118	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C119	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C120	1-124-234-00	ELECT	22uF	20%	16V
C121	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C122	1-126-963-11	ELECT	4.7uF	20%	50V
C123	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C124	1-104-396-11	ELECT	10uF	20%	16V
C125	1-126-177-11	ELECT	100uF	20%	10V
C126	1-126-177-11	ELECT	100uF	20%	10V
C127	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C128	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C129	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C130	1-124-443-00	ELECT	100uF	20%	10V
C131	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C132	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C133	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C141	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C142	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C151	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C152	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C153	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C154	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C155	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C156	1-163-085-00	CERAMIC CHIP	2PF		50V
C157	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C158	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C159	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C160	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C161	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C162	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C163	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C164	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C165	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C166	1-104-666-11	ELECT	220uF	20%	10V
C167	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C172	1-124-443-00	ELECT	100uF	20%	10V
C173	1-124-589-11	ELECT	47uF	20%	16V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C175	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C181	1-104-664-11	ELECT	47uF	20%	16V
C182	1-104-664-11	ELECT	47uF	20%	16V
C183	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C184	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
		< CONNECTOR >			
CN101	1-770-173-11	CONNECTOR, FFC/FPC 16P			
CN102	1-691-894-21	SOCKET, CONNECTOR 16P			
* CN103	1-568-852-11	SOCKET, CONNECTOR 9P			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D151	8-719-991-33	DIODE 1SS133T-77			
		< IC >			
IC101	8-759-498-93	IC LA9241M			
IC102	8-759-449-65	IC LC78622E			
IC103	8-759-449-66	IC LA6541			
IC104	8-759-428-57	IC LC89170M			
		< JUMPER RESISTOR >			
JW1	1-216-295-00	SHORT 0			
JW2	1-216-295-00	SHORT 0			
JW4	1-216-295-00	SHORT 0			
JW5	1-216-295-00	SHORT 0			
JW6	1-216-295-00	SHORT 0			
JW7	1-216-295-00	SHORT 0			
JW8	1-216-295-00	SHORT 0			
JW9	1-216-295-00	SHORT 0			
JW10	1-216-295-00	SHORT 0			
		< TRANSISTOR >			
Q101	8-729-119-78	TRANSISTOR 2SC403SP-51			
Q102	8-729-119-78	TRANSISTOR 2SC403SP-51			
Q103	8-729-119-76	TRANSISTOR 2SA1175-HFE			
		< RESISTOR >			
R101	1-216-097-00	RES, CHIP	100K	5%	1/10W
R102	1-216-093-00	METAL CHIP	68K	5%	1/10W
R103	1-216-093-00	METAL CHIP	68K	5%	1/10W
R104	1-216-093-00	METAL CHIP	68K	5%	1/10W
R105	1-216-093-00	METAL CHIP	68K	5%	1/10W
R106	1-216-097-00	RES, CHIP	100K	5%	1/10W
R107	1-216-097-00	RES, CHIP	100K	5%	1/10W
R108	1-216-068-00	METAL CHIP	6.2K	5%	1/10W
R109	1-216-076-00	METAL CHIP	13K	5%	1/10W
R110	1-216-093-00	METAL CHIP	68K	5%	1/10W
R111	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R112	1-216-109-00	METAL CHIP	330K	5%	1/10W
R113	1-216-099-00	METAL CHIP	120K	5%	1/10W
R114	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R115	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R116	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R117	1-216-085-00	METAL CHIP	33K	5%	1/10W
R118	1-216-081-00	METAL CHIP	22K	5%	1/10W
R119	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R120	1-216-085-00	METAL CHIP	33K	5%	1/10W
R121	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R122	1-216-083-00	METAL CHIP	27K	5%	1/10W
R123	1-216-099-00	METAL CHIP	120K	5%	1/10W
R124	1-216-093-00	METAL CHIP	68K	5%	1/10W
R125	1-216-089-00	RES, CHIP	47K	5%	1/10W
R126	1-216-037-00	METAL CHIP	330	5%	1/10W
R127	1-216-089-00	RES, CHIP	47K	5%	1/10W
R128	1-216-077-00	METAL CHIP	15K	5%	1/10W
R129	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R130	1-216-113-00	METAL CHIP	470K	5%	1/10W
R131	1-216-113-00	METAL CHIP	470K	5%	1/10W
R132	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R133	1-216-113-00	METAL CHIP	470K	5%	1/10W
R134	1-216-113-00	METAL CHIP	470K	5%	1/10W
R135	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R136	1-216-073-00	METAL CHIP	10K	5%	1/10W
R137	1-216-009-00	METAL CHIP	22	5%	1/10W
R138	1-216-089-00	METAL CHIP	47K	5%	1/10W
R151	1-216-045-00	METAL CHIP	680	5%	1/10W
R152	1-216-093-00	METAL CHIP	68K	5%	1/10W
R153	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W
R155	1-216-089-00	RES, CHIP	47K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-077-00	METAL CHIP	15K	5%	1/10W
R158	1-216-049-11	METAL CHIP	1K	5%	1/10W
R159	1-216-083-00	METAL CHIP	27K	5%	1/10W
R160	1-216-037-00	METAL CHIP	330	5%	1/10W
R161	1-216-073-00	METAL CHIP	10K	5%	1/10W
R162	1-216-037-00	METAL CHIP	330	5%	1/10W
R163	1-216-049-11	RES, CHIP	1K	5%	1/10W
R164	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R165	1-216-025-00	RES, CHIP	100	5%	1/10W
R166	1-216-025-00	RES, CHIP	100	5%	1/10W
R171	1-216-025-00	RES, CHIP	100	5%	1/10W
R172	1-216-025-00	RES, CHIP	100	5%	1/10W
R173	1-216-025-00	RES, CHIP	100	5%	1/10W
R174	1-216-025-00	RES, CHIP	100	5%	1/10W
R181	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R182	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R183	1-216-073-00	METAL CHIP	10K	5%	1/10W
R184	1-216-073-00	METAL CHIP	10K	5%	1/10W
R191	1-216-025-00	RES, CHIP	100	5%	1/10W
R192	1-216-041-00	METAL CHIP	470	5%	1/10W
R193	1-216-041-00	METAL CHIP	470	5%	1/10W
R194	1-216-025-00	RES, CHIP	100	5%	1/10W
R195	1-216-041-00	METAL CHIP	470	5%	1/10W
R196	1-216-025-00	RES, CHIP	100	5%	1/10W
R197	1-216-025-00	RES, CHIP	100	5%	1/10W
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
		< VIBRATOR >			
X101	1-577-576-21	VIBRATOR, CRYSTAL (16.9344MHz)			
**********					
*	1-663-972-11	DISC SENSOR (R) BOARD			
		**********			
*	4-990-669-01	HOLDER (SENSOR)			
	7-685-132-19	SCREW +BTP 2.6X5 TYPE2 N-S			
		< TRANSISTOR >			
Q51	8-729-926-31	PHOTO TRANSISTOR PT483F1S			
**********					

DISC SENSOR (S) | DISPLAY

Ref. No.	Part No.	Description			Remark
*	1-663-973-11	DISC SENSOR (S) BOARD			
		**********			
*	4-976-473-01	HOLDER (LED-S)			
		< CONNECTOR >			
* CN53	1-568-951-11	PIN, CONNECTOR 2P			
		< DIODE >			
D51	8-719-055-84	DIODE GL-528VS1 (DISC SENSOR)			
		< RESISTOR >			
R54	1-249-409-11	CARBON	220	5%	1/4W
**********					
*	A-4724-009-A	DISPLAY BOARD, COMPLETE			
		**********			
*	4-996-361-01	HOLDER (FL)			
		< CAPACITOR >			
C901	1-164-159-11	CERAMIC	0.1uF		50V
C902	1-162-215-31	CERAMIC	47PF	5%	50V
C903	1-161-494-00	CERAMIC	0.022uF		25V
C904	1-104-665-11	ELECT	100uF	20%	10V
C905	1-162-288-31	CERAMIC	330PF	10%	50V
		< CONNECTOR >			
CN901	1-568-802-11	SOCKET, CONNECTOR 19P			
		< LED >			
D901	8-719-313-50	LED SEL6810A-TH12 (PLUS ONE)			
D902	8-719-018-46	LED SEL3510C-CD (▷)			
D903	8-719-313-50	LED SEL6810A-TH12 (▮▮)			
D904	8-719-313-50	LED SEL6810A-TH12 (GROUP 1)			
D905	8-719-313-50	LED SEL6810A-TH12 (GROUP 2)			
D906	8-719-313-50	LED SEL6810A-TH12 (GROUP 3)			
D907	8-719-313-50	LED SEL6810A-TH12 (GROUP 4)			
D908	8-719-313-50	LED SEL6810A-TH12 (GROUP 5)			
		< FLUORESCENT INDICATOR TUBE >			
FL901	1-517-756-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC901	8-759-498-92	IC MSM9202-03GS-K			
IC902	8-749-014-66	IC NJL56H400			
IC903	8-759-183-47	IC M66310FP			
		< TRANSISTOR >			
Q901	8-729-900-80	TRANSISTOR DTC114ES			
Q902	8-729-900-80	TRANSISTOR DTC114ES			
Q903	8-729-900-80	TRANSISTOR DTC114ES			
Q904	8-729-900-80	TRANSISTOR DTC114ES			
Q905	8-729-900-80	TRANSISTOR DTC114ES			
		< RESISTOR >			
R901	1-249-415-11	CARBON	680	5%	1/4W
R902	1-249-417-11	CARBON	1K	5%	1/4W
R903	1-249-419-11	CARBON	1.5K	5%	1/4W
R904	1-249-421-11	CARBON	2.2K	5%	1/4W
R905	1-247-843-11	CARBON	3.3K	5%	1/4W
R906	1-249-427-11	CARBON	6.8K	5%	1/4W
R907	1-249-415-11	CARBON	680	5%	1/4W
R908	1-249-417-11	CARBON	1K	5%	1/4W
R909	1-249-419-11	CARBON	1.5K	5%	1/4W
R910	1-249-421-11	CARBON	2.2K	5%	1/4W
R911	1-247-843-11	CARBON	3.3K	5%	1/4W
R912	1-249-427-11	CARBON	6.8K	5%	1/4W
R913	1-249-431-11	CARBON	15K	5%	1/4W
R914	1-249-415-11	CARBON	680	5%	1/4W
R915	1-249-417-11	CARBON	1K	5%	1/4W
R916	1-249-419-11	CARBON	1.5K	5%	1/4W
R917	1-249-421-11	CARBON	2.2K	5%	1/4W
R918	1-247-843-11	CARBON	3.3K	5%	1/4W
R930	1-247-843-11	CARBON	3.3K	5%	1/4W
R931	1-249-417-11	CARBON	1K	5%	1/4W
R932	1-249-417-11	CARBON	1K	5%	1/4W
R933	1-249-417-11	CARBON	1K	5%	1/4W
R934	1-249-417-11	CARBON	1K	5%	1/4W
R936	1-249-441-11	CARBON	100K	5%	1/4W
R937	1-247-807-31	CARBON	100	5%	1/4W
R938	1-247-807-31	CARBON	100	5%	1/4W
R941	1-249-409-11	CARBON	220	5%	1/4W
R942	1-249-409-11	CARBON	220	5%	1/4W
R943	1-249-409-11	CARBON	220	5%	1/4W
R944	1-249-409-11	CARBON	220	5%	1/4W
R945	1-249-417-11	CARBON	1K	5%	1/4W
		< ROTARY ENCODER >			
RE901	1-475-543-11	ENCODER, ROTARY (DISC/CHARACTER PUSH ENTER)			
		< SWITCH >			
S901	1-554-303-21	SWITCH, TACTILE (CLEAR)			
S902	1-554-303-21	SWITCH, TACTILE (CHECK)			
S903	1-554-303-21	SWITCH, TACTILE (FADER)			
S904	1-554-303-21	SWITCH, TACTILE (MEMO SEARCH)			
S905	1-554-303-21	SWITCH, TACTILE (INPUT)			
S906	1-554-303-21	SWITCH, TACTILE (TIME/TEXT)			
S907	1-554-303-21	SWITCH, TACTILE (▷▷Ⅱ)			
S908	1-554-303-21	SWITCH, TACTILE (Ⅱ◁◁)			
S909	1-554-303-21	SWITCH, TACTILE (■)			
S910	1-554-303-21	SWITCH, TACTILE (▮▮)			
S911	1-554-303-21	SWITCH, TACTILE (▷)			
S912	1-554-303-21	SWITCH, TACTILE (PLUS ONE)			
S913	1-554-303-21	SWITCH, TACTILE (REPEAT)			
S914	1-554-303-21	SWITCH, TACTILE (PLAY MODE)			
S915	1-554-303-21	SWITCH, TACTILE (GROUP 5)			
S916	1-554-303-21	SWITCH, TACTILE (GROUP 4)			
S917	1-554-303-21	SWITCH, TACTILE (GROUP 3)			
S918	1-554-303-21	SWITCH, TACTILE (GROUP 2)			
S919	1-554-303-21	SWITCH, TACTILE (GROUP 1)			
S920	1-554-303-21	SWITCH, TACTILE (GROUP FILE)			
S925	1-762-936-11	SWITCH, LEVER (PUSH OPEN)			
**********					

Ref. No.	Part No.	Description			Remark
*	1-668-581-11	LED BOARD			
		*********			
		< CONNECTOR >			
CNP841	1-506-481-11	PIN, CONNECTOR 2P			
		< LED >			
D841	8-719-057-10	LED LNJ301MPUJAB (INSIDE ILLUMINATION)			
D842	8-719-057-09	LED LNJ801LPDJA (INSIDE ILLUMINATION)			
D843	8-719-064-21	LED LNJ801TPSJA (INSIDE ILLUMINATION)			
		< RESISTOR >			
R841	1-249-407-11	CARBON	150	5%	1/4W
R842	1-249-410-11	CARBON	270	5%	1/4W
R843	1-249-408-11	CARBON	180	5%	1/4W
**********					
*	A-4724-007-A	MAIN BOARD, COMPLETE (E)			
*	A-4724-012-A	MAIN BOARD, COMPLETE (US, CND)			
*	A-4724-015-A	MAIN BOARD, COMPLETE (AEP, UK, AED, SP, AUS)			
		**********			
		< CAPACITOR >			
C204	1-126-768-11	ELECT	2200uF	20%	16V
C205	1-126-768-11	ELECT	2200uF	20%	16V
C207	1-126-965-11	ELECT	22uF	20%	50V
C208	1-126-963-11	ELECT	4.7uF	20%	50V
C209	1-126-963-11	ELECT	4.7uF	20%	50V
C210	1-126-935-11	ELECT	470uF	20%	6.3V
C211	1-126-927-11	ELECT	2200uF	20%	10V
C212	1-126-935-11	ELECT	470uF	20%	16V
C220	1-126-963-11	ELECT	4.7uF	20%	50V
C221	1-126-935-11	ELECT	470uF	20%	6.3V
C222	1-126-963-11	ELECT	4.7uF	20%	50V
C250	1-126-962-11	ELECT	3.3uF	20%	50V
C382	1-126-962-11	ELECT	3.3uF	20%	50V
C501	1-161-494-00	CERAMIC	0.022uF		25V
C502	1-161-494-00	CERAMIC	0.022uF		25V
C503	1-104-665-11	ELECT	100uF	20%	10V
C504	1-162-306-11	CERAMIC	0.01uF	20%	16V
C505	1-162-306-11	CERAMIC	0.01uF	20%	16V
C506	1-162-306-11	CERAMIC	0.01uF	20%	16V
C507	1-162-294-31	CERAMIC	0.001uF	10%	50V
C508	1-162-306-11	CERAMIC	0.01uF	20%	16V
C509	1-161-494-00	CERAMIC	0.022uF		25V
C530	1-110-489-11	CAPACITOR	1F		5.5V
C531	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN501	1-568-835-11	SOCKET, CONNECTOR 16P			
* CN502	1-568-828-11	SOCKET, CONNECTOR 9P			
CN503	1-568-802-11	SOCKET, CONNECTOR 19P			
CN601	1-506-468-11	PIN, CONNECTOR 3P			
* CN603	1-568-955-11	PIN, CONNECTOR 6P			
* CN702	1-770-730-11	CONNECTOR, BOARD TO BOARD 11P			
CN704	1-778-982-11	CONNECTOR, BOARD TO BOARD 13P			
CN801	1-506-468-11	PIN, CONNECTOR 3P			
		< DIODE >			
D206	8-719-921-54	DIODE MTZJ-6.2B			
D207	8-719-982-22	DIODE MTZJ-30D			
D210	8-719-991-33	DIODE 1SS133T-77			
D211	8-719-921-42	DIODE MTZJ-5.1A			
D212	8-719-991-33	DIODE 1SS133T-77			
D304	8-719-991-33	DIODE 1SS133T-77			
D382	8-719-991-33	DIODE 1SS133T-77			
D404	8-719-991-33	DIODE 1SS133T-77			
D501	8-719-991-33	DIODE 1SS133T-77			
		< FERRITE BEAD >			
FB501	1-412-473-21	INDUCTOR 0uH			
FB503	1-412-473-21	INDUCTOR 0uH			
		< IC >			
IC201	8-759-061-65	IC LA5602			
IC202	8-749-011-78	IC BA17807T			
IC203	8-759-821-93	IC LA5601			
IC501	8-752-891-32	IC CXP84340-071Q			
IC502	8-759-463-99	IC M5M5256DFP-70XL			
IC601	8-759-356-03	IC BA6780			
		< COIL >			
L502	1-410-507-11	INDUCTOR 6.8uH			
		< TRANSISTOR >			
Q201	8-729-140-97	TRANSISTOR 2SB734-34			
Q304	8-729-900-65	TRANSISTOR DTA144ES			
Q305	8-729-900-80	TRANSISTOR DTC114ES			
Q380	8-729-900-65	TRANSISTOR DTA144ES			
Q381	8-729-900-65	TRANSISTOR DTA144ES			
Q382	8-729-900-65	TRANSISTOR DTA144ES			
Q383	8-729-900-65	TRANSISTOR DTA144ES			
Q404	8-729-900-65	TRANSISTOR DTA144ES			
Q405	8-729-900-80	TRANSISTOR DTC114ES			
Q481	8-729-900-65	TRANSISTOR DTA144ES			
Q501	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q502	8-729-900-89	TRANSISTOR DTC144ES			
		< RESISTOR >			
R201	1-249-435-11	CARBON	33K	5%	1/4W
R202	1-249-425-11	CARBON	4.7K	5%	1/4W
R210	1-249-411-11	CARBON	330	5%	1/4W
R320	1-249-441-11	CARBON	100K	5%	1/4W
R322	1-249-417-11	CARBON	1K	5%	1/4W
R329	1-249-441-11	CARBON	100K	5%	1/4W
R330	1-249-441-11	CARBON	100K	5%	1/4W
R333	1-249-441-11	CARBON	100K	5%	1/4W
R334	1-249-441-11	CARBON	100K	5%	1/4W
R420	1-249-441-11	CARBON	100K	5%	1/4W
R422	1-249-417-11	CARBON	1K	5%	1/4W
R430	1-249-441-11	CARBON	100K	5%	1/4W
R501	1-249-429-11	CARBON	10K	5%	1/4W
R502	1-249-429-11	CARBON	10K	5%	1/4W

MAIN | MOTOR | POWER SW | SW | TABLE SENSOR

Ref. No.	Part No.	Description			Remark
R503	1-249-429-11	CARBON	10K	5%	1/4W
R504	1-249-429-11	CARBON	10K	5%	1/4W
R505	1-249-429-11	CARBON	10K	5%	1/4W
R506	1-249-427-11	CARBON	6.8K	5%	1/4W
R507	1-249-427-11	CARBON	6.8K	5%	1/4W
R508	1-249-427-11	CARBON	6.8K	5%	1/4W
R509	1-249-429-11	CARBON	10K	5%	1/4W
R510	1-249-429-11	CARBON	10K	5%	1/4W
R511	1-249-429-11	CARBON	10K	5%	1/4W
R512	1-249-429-11	CARBON	10K	5%	1/4W
R513	1-249-429-11	CARBON	10K	5%	1/4W
R514	1-249-429-11	CARBON	10K	5%	1/4W
R515	1-249-429-11	CARBON	10K	5%	1/4W
R516	1-249-429-11	CARBON	10K	5%	1/4W
R517	1-249-437-11	CARBON	47K	5%	1/4W
R519	1-249-429-11	CARBON	10K	5%	1/4W
R520	1-249-429-11	CARBON	10K	5%	1/4W
R522	1-249-427-11	CARBON	6.8K	5%	1/4W
R523	1-249-425-11	CARBON	4.7K	5%	1/4W
R530	1-249-429-11	CARBON	10K	5%	1/4W
R531	1-249-429-11	CARBON	10K	5%	1/4W
R532	1-249-403-11	CARBON	68	5%	1/4W
R533	1-249-403-11	CARBON	68	5%	1/4W
R601	1-249-429-11	CARBON	10K	5%	1/4W
R602	1-249-428-11	CARBON	8.2K	5%	1/4W
R603	1-249-382-11	CARBON	1.2	5%	1/6W
R604	1-249-382-11	CARBON	1.2	5%	1/6W
R605	1-247-850-11	CARBON	6.2K	5%	1/4W
R606	1-249-429-11	CARBON	10K	5%	1/4W
R607	1-247-807-31	CARBON	100	5%	1/4W
		< VARIABLE RESISTOR >			
RV601	1-238-551-11	RES, ADJ, CARBON 220K			
		< TEST PIN >			
TP501	1-564-506-11	PLUG, CONNECTOR 3P			
		< VIBRATOR >			
X501	1-579-175-11	VIBRATOR, CERAMIC (10MHz)			
**********					
*	1-663-974-11	MOTOR BOARD			
		**********			
		< CONNECTOR >			
CN61	1-506-469-11	PIN, CONNECTOR 4P			
**********					
*	1-668-578-11	POWER SW BOARD			
		**********			
		< CONNECTOR >			
* CN903	1-568-943-11	PIN, CONNECTOR 5P			
		< LED >			
D909	8-719-057-09	LED LNJ801LPDJA (STANDBY)			
D910	8-719-057-97	LED SEL5923A-TP15 (MEGA CONTROL)			
D911	8-719-057-97	LED SEL5923A-TP15 (MEGA CONTROL)			
		< TRANSISTOR >			
Q906	8-729-900-80	TRANSISTOR DTC114ES			
Q907	8-729-119-76	TRANSISTOR 2SA1175-HFE			
		< RESISTOR >			
R919	1-249-415-11	CARBON	680	5%	1/4W
R920	1-249-417-11	CARBON	1K	5%	1/4W
R921	1-249-419-11	CARBON	1.5K	5%	1/4W
R946	1-249-407-11	CARBON	150	5%	1/4W
R947	1-249-429-11	CARBON	10K	5%	1/4W
R948	1-249-429-11	CARBON	10K	5%	1/4W
R949	1-249-407-11	CARBON	150	5%	1/4W
R950	1-249-407-11	CARBON	150	5%	1/4W
R951	1-249-417-11	CARBON	1K	5%	1/4W
		< SWITCH >			
S921	1-554-303-21	SWITCH, TACTILE (I/⏻)			
S922	1-554-303-21	SWITCH, TACTILE (X-FADE)			
S923	1-554-303-21	SWITCH, TACTILE (NO DELAY)			
S924	1-554-303-21	SWITCH, TACTILE (MEGA CONTROL)			
**********					
*	1-663-975-11	SW BOARD			
		*********			
		< CONNECTOR >			
* CN54	1-568-941-11	PIN, CONNECTOR 3P			
		< SWITCH >			
S51	1-571-958-11	SWITCH, PUSH (1 KEY) (UP)			
S52	1-571-958-11	SWITCH, PUSH (1 KEY) (DOWN)			
**********					
*	1-663-971-11	TABLE SENSOR BOARD			
		**********			
		< CONNECTOR >			
* CN51	1-568-944-11	PIN, CONNECTOR 6P			
CN52	1-506-481-11	PIN, CONNECTOR 2P			
		< PHOTO INTERRUPTER >			
IC51	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
IC52	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
IC53	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
		< RESISTOR >			
R51	1-249-416-11	CARBON	820	5%	1/4W
R52	1-249-416-11	CARBON	820	5%	1/4W
R53	1-249-416-11	CARBON	820	5%	1/4W
**********					
		MISCELLANEOUS			
		**********			
67	1-773-140-11	WIRE (FLAT TYPE) (19 CORE)			
⚠108	1-558-943-41	CORD, POWER (E)			
⚠108	1-575-651-21	CORD, POWER (AEP, AED, SP)			
⚠108	1-590-926-11	CORD, POWER (US, CND)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
⚠108	1-696-845-11	CORD, POWER (AUS)	
⚠108	1-751-529-11	CORD, POWER (UK)	
⚠109	1-569-007-11	ADAPTOR, CONVERSION 2P (E)	
111	1-782-465-11	WIRE (FLAT TYPE) (16 CORE)	
119	1-769-921-11	WIRE (FLAT TYPE) (9 CORE)	
322	1-777-874-11	WIRE (FLAT TYPE) (16 CORE)	
⚠401	8-848-379-31	OPTICAL PICK-UP KSS-213B/S-N	
408	1-777-874-11	WIRE (FLAT TYPE) (16 CORE)	
M101	X-2646-110-2	T, T CHASSIS ASSY (MG) (F) (SPINDLE)	
M102	X-2625-769-1	MOTOR GEAR ASSY (MB) (RP) (SLED)	
M61	X-4948-434-1	MOTOR ASSY (LOADING)	
M62	X-4948-434-1	MOTOR ASSY (TABLE)	
⚠T501	1-431-333-11	TRANSFORMER, POWER (US, CND)	
⚠T501	1-431-334-11	TRANSFORMER, POWER (AEP, UK, AED, SP, AUS)	
⚠T501	1-431-335-11	TRANSFORMER, POWER (E)	

****

ACCESSORIES & PACKING MATERIALS

****

	1-475-607-11	REMOTE COMMANDER (RM-DX57)	
	1-558-271-11	CORD, CONNECTION (AUDIO 108cm)	
	1-777-241-11	CORD, CONNECTION (CONTROL A1) (CND)	
	3-810-765-32	MANUAL, COMMONNESS INSTRUCTION (ENGLISH) (US, AUS)	
	3-810-765-42	MANUAL, COMMONNESS INSTRUCTION (ENGLISH,FRENCH, GERMAN, ITALIAN, SPANISH, DUTCH,SWEDISH, PORTUGUESE, CHINESE) (CND, AEP, E, SP)	
	3-862-557-11	MANUAL, INSTRUCTION (ENGLISH) (EXCEP AED)	
	3-862-557-21	MANUAL, INSTRUCTION (FRENCH, SPANISH, CHINESE) (CND, AEP, E, SP)	
	3-862-557-31	MANUAL, INSTRUCTION (GERMAN, DUTCH, ITALIAN, PORTUGUESE) (AEP)	
	3-862-557-41	MANUAL, INSTRUCTION (SWEDISH, FINNISH, DANISH) (AED)	
	4-981-643-01	COVER, BATTERY (for RM-DX57)	
	4-991-161-01	LET (50), BOOK	
*	4-991-854-01	LABEL (DISC)	

****

****

HARDWARE LIST

****

#1	7-685-871-01	SCREW +BVTT 3X6 (S)
#2	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S
#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#4	7-685-872-09	SCREW +BVTT 3X8 (S)
#5	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#6	7-685-873-09	SCREW +BVTT 3X10 (S)
#7	7-685-132-19	SCREW +BTP 2.6X5 TYPE2 N-S
#8	7-685-107-11	SCREW +P 2X12 TYPE2 NON-SLIT
#9	7-685-535-19	SCREW +BTP 2.6X10 TYPE2 N-S
#10	7-685-134-19	SCREW (+ PTPWH) (2.6X8)
#11	7-621-770-67	SCREW +PWH 2.6X6
#12	7-685-649-79	SCREW +P 3X14 TYPE2 NON-SLIT
#13	7-621-255-15	SCREW +P 2X3

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

9-922-818-11

Sony Corporation
Home A&V Products Company

98D0589-1
Printed in Japan © 1998. 4
Published by Quality Assurance Dept.
(Shibaura)